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GO; GO:0003823; F:antigen binding; N7
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InterPro; IPR007110; Ig-like.
InterPro; IPR003597; Ig_d1.
InterPro; IPR003006; Ig_MHC.
Pfam; PF00047; ig; 4.
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model of the Fc of immunoglobulin E.";
model of the 23:1063-1075(1986).
1. Immunol. 23:1063-1075(1986).
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;; IIGE; 15.-JUL-92.
;; IEP5; 30-JAN-02.
;; IGB4; 16-MAY-01.
;; IGOV; 18-SEP-02.
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MEDLINB=22451042; PubMed=12563287;

Tschopp J., Martinon F., Burns K.;

TNALPs: a novel protein family involved in inflammation.";

Nat. Rev. Mol. Cell Biol. 4:95-104(2003).
                                                                                                                SEQUENCE FROM N.A.

MEDLINE=22162427; PubMed=12019269;

Wang L., Manji G.A., Grenier J.M., Al-Garawi A., Merriam S.,

Lora J.M., Geddes B.J., Briskin M., DiStefano P.S., Bertin J.;

LORA J.M., Geddes B.J., Briskin M., DiStefano P.S., Bertin J.;

"PYPAP7, a novel PYRIN-containing Apaf1-like protein that regulates

"PYPAP
                                                                                                                                                                                                                                                                 Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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MEDLINE=21173698; PubMed=11259647;
MEDLINE=21173698; PubMed=11259647;
Nierman W.C., Feldblyum T.V., Laub M.T., Paulsen I.T., Nelson K.E.,
Pisen J.A., Heidelberg J.F., Alley M.R.K., Ohta N., Maddock J.R.,
Potocka I., Nelson W.C., Newton A., Stephens C., Phadke N.D., Ely B.,
Poboy R.T., Dodson R.J., Durkin A.S., Gwinn M.L., Haft D.H.,
Kolonay J.F., Smit J., Craven M.B., Khouri H., Shetty J., Berry K.,
Ulterback T., Tran K., Wolf A., Vamathevan J., Ermolaeva M., White O.,
Salzberg S.L., Venter J.C., Shapiro L., Fraser C.M.,
"Complete genome sequence of Caulobacter crescentus.";
Proc. Natl. Acad. Sci. U.S.A. 98:4136-4141(2001).
-i- CATALYTIC ACTIVITY: ATP + L-threonine + tRNA(Thr) = AMP +
                                                                                                                                                                                                                                                                                                                                              CAUCR
                                                                                                                                                                                                                                                                                                                     SYT_CAUCR
Q9AAX8;
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NP_BIND
SEQUENCE
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REPEAT
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REPEAT
                                                                                                                                                                                                           Caulobacter crescentus.
Bacteria; Proteobacteria; Alphaproteobacteria; Caulobacterales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro; IPR007091; LRR RNinh.
InterPro; IPR007011; NACHT NTPase.
InterPro; IPR004020; PADD DAPIN_dom.
Pfam; PF05729; NACHT; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                    Caulobacteraceae; Caulobacter
                                                                                                                                                                                                                                          THRS OR CC0464.
                                                                                                                                                                                                                                                                 Threonyl-tRNA synthetase (EC
                                                                                                                                                                                                                                                                              28-FEB-2003
10-OCT-2003
                                                                                                                                                                                                                                                                                                      28-FEB-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PROSITE; PS50824; DAPIN; 1. PROSITE; PS50837; NACHT; 1.
                                                                                                                                                                                       NCBI_TaxID=155892;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REPEAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SIMILARITY: Contains 1 NACHT domain.
SIMILARITY: Contains 9 leucine-rich (LRR) repeats.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SWISS-PROT entry is copyright. It is produced through a collaboration een the Swiss Institute of Bioinformatics and the EMBL outstation - European Bioinformatics Institute. There are no restrictions on its
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AF464765; AAL69963.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PF02758; PAAD DAPIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                        1 EDGQVMDVD 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity 6; Conserv
                                                                                                                                                                                                                                                                                                                                                                                              EDGQVQEID 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   980 AA;
                                                                                                                                                                                                                                                               (Rel. 41, Last sequence update)
(Rel. 42, Last annotation updat
NA synthetase (EC 6.1.1.3) (Thre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      172
614
674
760
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491
638
697
784
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928
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66.7%;
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LRR 1.
LRR 2.
LRR 3.
LRR 4.
LRR 5.
LRR 6.
LRR 6.
LRR 7.
LRR 8.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 37; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LRR
ATP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DAPIN
                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           987654321
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(Threonine--tRNA ligase)
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InterPro; IPR004154; HGTP anticodon.
InterPro; IPR004055; TGS dom.
InterPro; IPR002314; tRNA-synt 2b.
InterPro; IPR002320; tRNA-synt thr.
InterPro; IPR002320; tRNA-synt thr.
InterPro; IPR006195; tRNA ligase II.
Pfam; PF03129; HGTP anticodon; 1.
Pfam; PF02824; TGS; 1.
                                                                                                                                                                                                                                                                 Q9BLJ6;
28-FEB-2003
28-FEB-2003
28-FEB-2003
                                                                                                                                                                           Eukaryota; Metazoa; Artn:
Neoptera; Endopterygota;
Bombycidae; Bombyx.
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PIR; G87306; G87306.
                                                                STRAIN=N4; TISSUE=Egg;

MEDLINE=21315830; PubMed=11422373;

MOTIDE Y., Niimi T., Yamashita O., Yaginuma T.;

"Samui, a novel cold-inducible gene, encoding a protein with a BAG
domain similar to silencer of death domains (SODD/BAG-4), isolated
                                                                                                                                                                                                                                                                                                                        BAGS
                                                                                                                                                                                                                                                                                                                                        BOMMO
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METAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
-!- FUNCTION: May play a role in transmitting a signal which both
protects nondiapause eggs from cold injury and terminates diamin diapause eggs.
                                       from Bombyx diapause eggs.";
Eur. J. Biochem. 268:3432-3442(2001).
                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                         Bombyx mori
                                                                                                                                                                                                                                         SAMUI.
                                                                                                                                                                                                                                                        BAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
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PROSITE; PS50862; AA TRNA LIGASE II; 1.
Aminoacyl-tRNA synthetase; Protein bios;
Metal-binding; Zinc; Complete proteome.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        diphosphate + L-threonyl-tRNA(Thr).
-! COFACTOR: Binds 1 zinc ion per subunit (By similarity).
-!- SUBUNIT: Homodimer (By similarity).
-!- SUBCELLUIAR LOCATION: Cytoplasmic.
-!- SIMILARITY: Belongs to class-II aminoacyl-tRNA synthetase family.
                                                                                                                                                                   NCBI_TaxID=7091;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        METAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      METAL
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                                                                                                                                                                                                                                                                                                                          BOMMO
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DGQVLDLD 48
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340
391
517
655 AA;
                                                                                                                                                                                                                        (Silk moth)
                                                                                                                                                                                                                                                  (Rel. 41, Created)
(Rel. 41, Last sequence update)
(Rel. 41, Last annotation update)
containing protein Samui.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
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73719
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340
391
                                                                                                                                                                                            Arthropoda; Hexapoda; Insecta; Pterygota;
gota; Lepidoptera; Glossata; Ditrysia; Bom
                                                                                                                                                                                                                                                                                                                                                                                                                                                               76.6%;
75.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         M.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 36; DB Pred. No. 35; 2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ZINC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 36;
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Y SIMILARITY).
Y SIMILARITY).
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              diapause
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W SEQUENCE FROM N.A.

B SEQUENCE FROM N.A.

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B SEQUENCE FROM N.A.

RA MEDLINE=20504483; PubMed=11016950;

RA MEDLINE=20504483; PubMed=11016950;

RA MEDLINE=20504483; PubMed=11016950;

RA MINIME S., Kennedy S.P., Mahiaras G.G., Thorsson V., Sbrogna J.,

RA Shukla H.D., Lasky S.R., Baliga N.S., Thorsson V., Sbrogna J.,

RA Swartzell S., Weir D., Hall J., Dahl T.A., Welti R., Goo Y.A.,

RA Leithauser B., Keller K., Cruz R., Danson M.J., Hough D.W.,

RA Maddocks D.G., Jablonski P.E., Krebs M.P., Angevine C.M., Dale H.,

RA Maddocks D.G., Jablonski P.E., Krebs M.P., Angevine C.M., Dale H.,

RA Maddocks D.G., Jablonski P.E., Krebs M.P., Danis P.P., Omer A.D.,

RA Alam M., Freitas T., Hou S., Daniels C.J., Dennis P.P., Omer A.D.,

RA Alam M., Freitas T., Hou S., Daniels C.J., Dennis P.P., Omer A.D.,

RA Ebhardt H., Lowe T.M., Liang P., Riley M., Hood L., DasSarma S.;

RT "Genome sequence of Halobacterium species NRC-1.";

Proc. Natl. Acad. Sci. U.S.A. 97:12176-12181(2000).

RC -1- FUNCTION: This protein seals, during DNA replication, DNA

CC -1- FUNCTION: This protein seals, during DNA replication, DNA

CC -1- FUNCTION: This protein seals, during DNA replication, DNA
RESULT
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16-OCT-2001
16-OCT-2001
28-FBB-2003
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between
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DOMAIN
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                                                                                                                                                                                                                                                                                                                                                                     Halobacterium sp. (strain NRC-1 / ATCC 700922 / JCM 11081).
Archaea; Euryarchaeota; Halobacteria; Halobacteriales;
Halobacteriaceae; Halobacterium.
                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR003103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SUBUNIT:
                                                                                                                                                                                                                                                                                                                                                                                                                      OCT-2001 (Rel. 40, Created)
OCT-2001 (Rel. 40, Last sequence update)
FEB-2003 (Rel. 41, Last annotation update)
ligase (EC 6.5.1.1) (Polydeoxyribonucleotide
OR VNG0881G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       s SWISS-PROT entry is copyright. It is produced through ween the Swiss Institute of Bioinformatics and the EN European Bioinformatics Institute. There are no resti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INDUCTION: By cold.
MISCELLANBOUS: 'Samui' means 'cold' in Japanese
SIMILARITY: Contains 1 BAG domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE SPECIFICITY: Expressed at high levels in chilled diapause eggs and to a lesser extent in chilled nondiapause eggs. DEVELOPMENTAL STAGE: In diapause eggs, expressed after chilling at 5 degrees Celsius for 5-6 days, persists for 30 days and then
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GO:0030544; F:Hsp70 prot
                    \label{eq:continuity} $$ \{ deoxyribonucleotide \} (N+M) . $$ SIMILARITY: Belongs to the ATP-dependent
                                                                 Similarity).
CATALYTIC ACTIVITY: ATP + (deoxyribonucleotide) (N)
                                                                                                                                                                                                                                                                                                                                                           TaxID=64091;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HALN1
                                                   deoxyribonucleotide (M)
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677 1
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87.5%;
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Pred. No. 36;
0; Mismatches
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GLN-RICH.
GLN/PRO-RICH.
LYS-RICH.
BAG.
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                                                         = AMP
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                                                         +
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                                                       diphosphate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ormatics and the EMBL outst
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AA
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                        DNA ligase family.
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Interpro; IPR000977; DNA_ligase.
Pfam; PF01068; DNA_ligase. A_C; 1.
Pfam; PF04679; DNA_ligase. A_C; 1.
Pfam; PF04679; DNA_ligase. A_C; 1.
TIGRRAMS; TIGR0574; dnll; I.
TIGRRAMS; TIGR0574; dnll; I.
PROSITE; PS00697; DNA_LIGASE_A1; 1.
PROSITE; PS00333; DNA_LIGASE_A2; FA
PROSITE; PS00333; DNA_LIGASE_A2; FA
PROSITE; PS00160; DNA_LIGASE_A3; 1.
DNA_repair; DNA_replication; DNA_repair; DNA_repai
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Preprotein translocase secA subunit.
SECA OR DIV+ OR BSU35300.

Bactilus subtilis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         P28366;
01-DEC-1992 (Rel. 2
01-DEC-1992 (Rel. 2
10-OCT-2003 (Rel. 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bloinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=91192600; PubMed=1901557; Sadaie Y., Takamatsu H., Nakamura K., Yamane K.; Sequencing reveals similarity of the wild-type div+ gene of subtilis to the Escherichia coli secA gene."; Gene 98:101-105(1991).
Kunst F., Ogasawara N., Moszer I., Albertini A.M., Alloni G.,
Azevedo V., Bertero M.G., Bessieres P., Bolottin A., Borchert S.,
Borriss R., Boursier L., Brans A., Braun M., Brignell S.C., Bron S.,
Brouillet S., Bruschi C.V., Caldwell B., Capuano V., Carter N.M.,
Choi S.K., Codani J.J., Connerton I.F., Cummings N.J., Daniel R.A.,
Denizot F., Devine K.M., Dusterhoft A., Ehrlich S.D., Emmerson P.T.,
Entian K.D., Errington J., Fabret C., Ferrari E., Foulger D.,
Fritz C., Fujita M., Fujita Y., Fuma S., Galizzi A., Galleron N.,
Ghim S.Y., Glaser P., Goffeau A., Golightly E.J., Grandi G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Soldo B., Lazarevic V., Mauel C., Karamata D., "Sequence of the Bacillus subtilis 168 chromosomal regions of the Bacillus subtilis 168 chromosomal regions of the Bacillus subtilis 168 chromosomal regions of the EMBL/GenBank/DDBJ databases submitted (JAN-1997) to the EMBL/GenBank/DDBJ databases
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                                                                                                                                                                                                                                                                                                                                                            MEDLINE=98044033; PubMed=9384377;
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RA Kobayashi Y., Koetter P., Kooningstein G., Krogh S., Kumano M.,

RA Kurita K., Lapidus A., Liu H., Masuda S., Lauber J., Lazarevic V.,

RA Lee S.M., Levine A., Liu H., Masuda S., Mauel C., Medique C.,

RA Medina N., Mellado R.P., Mizuno M., Moestl D., Nakai S., Noback M.,

None D., O'Reilly M., Ogawa K., Ogiwara A., Oudega B., Park S.H.,

Parro V., Pohl T.M., Portetelle B., Porwollik S., Prescan E., Pujic P., Purnelle B., Rapoport G., Rey M., Reynolds S.,

Rieger M., Rivolta C., Rocha E., Roche B., Rose M., Sadaie Y.,

Rieger M., Rivolta C., Rocha E., Roche B., Rose M., Sadaie Y.,

Sato T., Scanlan E., Schleich S., Schroeter R., Scoffone F.,

Sekiguchi J., Serors S.J., Serror P., Shin B.S., Soldo B.,

Sorokin A., Tanakoshi A., Tanaka T., Terpstra P., Tognoni A.,

Takeuchi M., Tamakoshi A., Tanaka T., Terpstra P., Tognoni A.,

Yoshida K., Wambutt R., Wedler E., Wedler H., Weitzenegger T.,

Winters P., Wipat A., Yamamoto H., Yamane K., Yasumoto K., Yata K.,

"The complete genome sequence of the Gram-positive bacterium Bacillus subtilis.";
                                                                                                                                          EMBL; D10279; BAA01122.1; -.
EMBL; U56901; AAC44957.1; -.
EMBL; Z99122; CAB15547.1; -.
EMBL; X62035; CAA43977.1; -.
PIR; JQ0647; JQ0647; JQ0647; JQ0647; JQ0647; JQ0647; JQ0647; JQ0647; SEP-02.
PDB; IM7/4; 20-SEP-02.
SubtiList; B610741; SecA.
InterPro; IPR001650; Helicase C.
InterPro; IPR004027; SEC C motif.
InterPro; IPR004027; SEC C.
Pfam; PF00271; helicase C; 1.
Pfam; PF02810; SEC-C, 1.
Pfam; PF02810; SEC-C, 1.
Pfam; PF01043; SecA_protein; 1.
                                                                                                                                                                                                                                                                                                                                                                                                  use by non-profit institutions as long as its content modified and this statement is not removed. Usage by an entities requires a license agreement (See http://www.isb-or send an email to license@isb-sib.ch).
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Overhoff B., Klein M., Spies M., Freudl R.,
"Identification of a gene fragment which codes for the 364 amino-
terminal amino acid residues of a SecA homologue from Bacillus
subtilis: further evidence for the conservation of the protein export
apparatus in Gram-positive and Gram-negative bacteria.";
Mol. Genet. 228:417-423(1991).
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Hilbert H.,
     SEQUENCE
                                     Complete proteome; NP_BIND 100
                                                                                       PROSITE;
                                                                                                                             PRINTS; PR00906;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FUNCTION: Involved in protein export. Interacts with the secY/secE subunits. SecA has a central role in coupling the hydrolysis of ATP to the transfer of pre-secretory periplasmic and outer membrane proteins across the membrane.

-!- SUBUNIT: Part of the prokaryotic protein translocation apparatus which comprise secA, secB, secE, secF, secG and secY (By
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           the European Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE OF 1-364 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nature 390:249-256(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRAIN=ATCC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SIMILARITY: Belongs to the secA family.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              similarity)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SWISS-PROT entry is copyright. It is produced through a ceen the Swiss Institute of Bioinformatics and the EMBL
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                                                                                         PS01312; SECA; 1.
                                                                                                          TIGR00963; secA; 1.
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     841
                    126
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     AA;
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6; SECA.
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                                                     ATP-binding; Membrane; Translocation; Transport; 3D-structure.
                                     107
 95530 MW;
ATP (POTENTIAL).
V -> I (IN REF. 4).
; 9AAC3630139F5EFF CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                    (See http://www.isb-sib.ch/announce/
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Jones L.,
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MBL outstation -
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EMBL; Z73955; CAA97300...
EMBL; X81072; CAA56963.:
PIR; S64663; S64603.
GermOnline; 141582; -.
PROSITE; PS50014, ATP-binding; Bromodomain.
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01-FEB-1995
                                                                                     PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                YEAST
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Schnall R., Mannhaupt G., Stucka R., Tauer R., Ehnle S., Schwarzlose C., Vetter I., Feldmann H.; Schwarzlose C., Vetter I., Feldmann H.; "Identification of a set of yeast genes coding for a novel family putative ATPases with high similarity to constituents of the 26S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Saccharomyces cerevisiae (Baker's yeast).
Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes;
Saccharomycetales; Saccharomycetaceae; Saccharomyces.
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10-OCT-2003 (Rel. 42
TAT-binding homolog
                                                                                                                                  SMART; SM00382; AAA; 1.
                                                                                                                                                                                                      InterPro; IPR003593; AAA ATPase.
InterPro; IPR003959; AAA ATPase centr.
InterPro; IPR003960; AAA Sub
InterPro; IPR001487; Bromodomain.
                                                                                                                                                                                                                                                                                                   SGD; S0003502; YTA7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    the European Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -!- SIMILARITY: Contains 1 bromodomain.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Submitted (APR-1996) to the EMBL/GenBank/DDBJ databases
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Agostoni Carbone M.L.,
Vanoni M., Panzeri L.;
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homolog 7.
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                                                                                                     use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=94271242; PubMed=8003021;
Nimura K., Yoshikawa H., Takahashi H.;
"Sequence analysis of the third dnaK homolog gene in Synechococcus
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15-DEC-1998 (Rel.
16-OCT-2001 (Rel.
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                     EMBL; AB003519; BAA21679.1; -. EMBL; D29968; BAA06235.1; -. PIR; JC5550; JC5550.
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                                                                                                                                                                                    s SWISS-PROT entry is copyright. It is produced through a ween the Swiss Institute of Bioinformatics and the EMBL European Bioinformatics Institute. There are no restrict
                                                                                                                                                                                                                                                                    SUBCELLULAR LOCATION: Cytoplasmic (By similarity). SIMILARITY: Belongs to the dnaJ family. SIMILARITY: Contains 1 J domain.
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iophys. Res. Commun. 205:2016-2017(1994)
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Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDIINE=22957627; PubMed=14528314;
Duchaud E., Rusniok C., Frangeul L., Buchrieser C., Givaudan A., Taourit S., Bocs S., Boursaux-Eude C., Chandler M., Charles J.-F., Dassa E., Derose R., Derzelle S., Freyssinet G., Gaudriault S., Medigue C., Lanois A., Powell K., Siguier P., Vincent R., Wingate V. Zouine M., Glaser P., Boemare N., Danchin A., Kunst F.;
"The genome sequence of the entomopathogenic bacterium Photorhabdus luminescens.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PROSITE; P800636; DNAJ 1; 1.

PROSITE; PS50076; DNAJ 2; 1.

Chaperone; DNA replication; Heat shock.

DOMAIN

4

73

J-DOMAIN
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PRINTS; PR00625; DNAJPROTEIN.
SMART; SM00271; DnaJ; 1.
                                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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Pfam; PF01556; DnaJ_C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro; IPR002939;
InterPro; IPR001623;
InterPro; IPR008971;
InterPro; IPR003095;
                                                                   PhotoList; plu4682; -.

HAMAP; MF 00012; -; 1.

PROSITE; PS00886; ILVD EDD 1; 1.

PROSITE; PS00887; ILVD EDD 2; 1.

Branched-chain amino acid biosynthesis; Lyase; Iron; Iron-sulfur; 4Fe-48; Complete proteome.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=141679;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Photorhabdus luminescens (subsp. laumondii).
Bacteria; Proteobacteria; Gammaproteobacteria;
Enterobacteriaceae; Photorhabdus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Dihydroxy-acid dehydratase
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15-MAR-2004 (Rel. 43, Last
15-MAR-2004 (Rel. 43, Last
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q7MYJ5;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ILVD OR PLU4682.
SEQUENCE
                                                                                                                                                                                                                         EMBL; BX571874; CAE17054.1; -.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PATHWAY: Valine and isoleucine biosynthesis; SIMILARITY: Belongs to the ilvD / edd family.
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195
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     AA;
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J DnaJ_N.
HSP40 Dr
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     65785 MW;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           annotation update) (EC 4.2.1.9) (DAD)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 33; DB Pred. No. 55; 4; Mismatches
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IRON-SULFUR (4FE-48
IRON-SULFUR (4FE-48;
8150D713D04D4172
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(4FE-4S)
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       CRC64;
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Matches 6
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                                                                                                                                                                 EMBL; U60315; AAC55228.1; -.
PIR; T30702; T30702.
InterPro; IPR001410; DEAD.
InterPro; IPR001650; Helicase_C.
InterPro; IPR00130; SNF2_N.
Pfam; PF00271; helicase_C; 1.
Pfam; PF00275; helicase_C; 1.
SMART; SM00487; DEXDC; 1.
SMART; SM00487; DEXDC; 1.
SMART; SM00490; HELICC; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JLT 10
L MCV1
NTP1 MCV1
Q98267;
Q98267;
                                                                                                                               NP_BIND
SITE
                                                                                                                                                                                                                                                                                                                                         use by non-profit institutions as long modified and this statement is not removed. entitles requires a license agreement (See or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                   -!- FUNCTION: SERVES TWO ROLES IN TRANSCRIPTION; IT ACTS IN CONCERT WITH VIRAL TERMINATION FACTOR/CAPPING ENZYME TO CATALYZE RELEASE OF UUUUUNU-CONTAINING NASCENT RNA FROM THE ELONGATION COMPLEX, AND IT ACTS BY ITSELF AS A POLYMERASE ELONGATION FACTOR TO FACILITATE READTHROUGH OF INTRINSIC PAUSE SITES (BY SIMILARITY.)
-!- CATALYTIC ACTIVITY: NTP + H(2) O = NDP + phosphate.
-!- SIMILARITY: Belongs to the helicase family. NPH I subfamily.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-MAY-2000 (Rel. 39, Created)
30-MAY-2000 (Rel. 39, Last sequence update)
15-MAR-2004 (Rel. 43, Last annotation update)
Nucleoside triphosphatese I (EC 3.6.1.15) (Nucleoside triphosphate
                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Genome sequence of a human tumorigenic poxvirus: specific host response-evasion genes.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Molluscipoxvirus.
NCBI_TaxID=10280;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Science 273:813-816(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Moss B.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=96325459;
Senkevich T.G., Bu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Molluscum contagiosum virus subtype 1
Viruses; dsDNA viruses, no RNA stage;
                                                                                                                                                          NIAMOC
  598
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                                                                      Similarity
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EDGRVYDAD 606
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394
                                                       Conservative
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                                                                                                              AA;
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ugert J.J., Sisler J.R.,
                                                                                                                                                       480
                                                                                                             72102 MW;
                                                                    70.2%;
66.7%;
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                                                                   Score 33;
Pred. No.
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                                                                                                                            DEXH BOX
                                                                                                                                     HELICASE C.
ATP (BY SIMILARITY).
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                                                                                                             B786EFBA17E12F56 CRC64;
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Poxviridae;
                                                                                                                                                                                                                                                                                                                                                     (See http://www.isb-sib.ch/announce/
                                                 ..2e+02;
2;
                                                                                DB 1;
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                                                                               Length 634;
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RESULT 11
GYRA_SYNY3
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Matches
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InterPro; IPR006691; DNA_gyraseA C.
InterPro; IPR002205; DNA_topoisoIV.
Pfam; PF03989; DNA_gyraseA_C; 6.
Pfam; PF00521; DNA_topoisoIV; 1.
ProDom; PD000742; DNA_topoisoIV; 2.
SMART; SM00434; TOP4c; 1.
                                                                            PMT1 CANAL
074189;
15-JUL-1999
15-JUL-1999
10-CCT-2003
                         \label{local_phosphate} Dolichyl-phosphate-mannose--protein \ \mbox{mannosyltransferase} \\ (EC\ 2.4.1.109).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sugiura M., Tabata S.;
"Sequence analysis of the genome of the unicellular cyanobacterium Synechocystis sp. strain PCC6803. I. Sequence features in the 1 Mb region from map positions 64% to 92% of the genome.";
DNA Res. 2:153-166(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    use by non-profit institutions as long modified and this statement is not removed. entitles requires a license agreement (See lor send an email to license@isb-sib.ch).
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30-MAY-2000 (Rel. 39, Last sequence up
16-OCT-2001 (Rel. 40, Last annotation
DNA gyrase subunit A (EC 5.99.1.3).
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Q55738;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Isomerase;
ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; D64002; BAA10380.1; -. PIR; S76534; S76534.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=96127529; PubMed=8590279; Kaneko T., Tanaka A., Sato S., Ko
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Synechocystis sp. (strain PCC 6803).
Bacteria; Cyanobacteria; Chroococcales; Synechocystis.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HSSP; P09097; 1AB4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FUNCTION: DNA gyrase negatively supercoils closed circular double-stranded DNA in an ATP-dependent manner and also catalyzes the interconversion of other topological isomers of double-stranded DNA rings, including catenanes and knotted rings.

CATALYTIC ACTIVITY: ATP-dependent breakage, passage and rejoining of double-stranded DNA.

SUBUNIT: Made up of two chains. The A chain is responsible for DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          breakage and rejoining; the B chain catalyzes ATP enzyme forms an A2B2 tetramer.
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5; Conserv
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                                                                                                                                                                                                                                                                                                                           EDGELIDTD 502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Topoisomerase; DNA-binding; Complete proteome.
122 122 DNA CLEAVAGE (BY SIMILARITY).
860 AA; 95073 MW; 8CE4E91C4CE874C5 CRC64;
                                                                            (Rel. 38, Created)
(Rel. 38, Last sequence update)
(Rel. 42, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                       STANDARD;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 33;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                          1.7e+02;
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RESULT 13
RPOB_THEAQ
ID RPOB_THEAQ
AC Q9KWU7;
DT 28-FEB-2003
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                                                                                                                              Query Match
Best Local
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CARBOHYD
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                 the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE=98361950; PubMed=9694829;
Timpel C., Strahl-Bolsinger S., Ziegelbauer K., Ernst
"Multiple functions of Pmtlp-mediated protein O-mannos
fungal pathogen Candida albicans.";
J. Biol. Chem. 273:20837-20846(1998).
                                                                                                                                                                                                                                     DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                            Pfam; PF02815; MIR; 3. Pfam; PF02366; PMT; 1. SMART; SM00472; MIR; 3.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Fungi; Ascomycota; Saccharomycetales; mitosporic
   Q9KWŪ7;
28-FEB-2003 (Rel.
                                                                                                                                                            SEQUENCE
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                                                                                                                                                                                                                                                         TRANSMEM
                                                                                                                                                                                                                                                                                                                                                   Endoplasmic
TRANSMEM
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InterPro; IPR003608; MIR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; AF000232; AAC31119.1; -
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESIDUES ON PROTEINS.

CATALYTIC ACTIVITY: Dolichyl phosphate D-m
dolichyl phosphate + O-D-mannosyl-protein.

PATHWAY: Glycosylation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SUBCELLULAR LOCATION: Integral
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SWISS-PROT entry is copyright. It is produced through a collaboration een the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                            835
                                                                                                                   Similarity
7; Conserv
                                                                                               EDGQVMDVD
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109 129
150 170
196 216
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226
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252
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604
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                         STANDARD;
    41, Created)
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272
311
624
663
686
720
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528
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77.8%;
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MIR 2.
MIR 3.
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POTENTIAL.
POTENTIAL.
                                                                                                                               Score 33;
Pred. No.
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POTENTIAL.
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liated protein O-mannosylation
                                                                                                                     Mismatches
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GLCNAC...
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1.7e+02;
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RESULT 14
CH10_BORPE
ID CH10_BORPE
ID CH10_BORPE
AC P48221,
DT 01-FEB-1996 (
DT 01-FEB-1996 (
DT 15-MAR-2004 (
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OS Bordetella pe
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Best Local
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InterPro; IPR007644; RNA pol Rpb2 1.
InterPro; IPR007642; RNA pol Rpb2 2.
InterPro; IPR007645; RNA pol Rpb2 3.
InterPro; IPR007645; RNA pol Rpb2 3.
InterPro; IPR007120; RNA pol Rpb2 7.
InterPro; IPR007120; RNA pol Rpb2 7.
InterPro; IPR00761; RNA pol Rpb2 7.
Iffam; PF04563; RNA pol Rpb2 3; 1.
InterPro; IRR00761; RNA pol Rpb2 3; 1.
InterPro; IRR00761; RNA pol Rpb2 3; 1.
InterPro; IRR00762; RNA pol Rpb2 7; 1.
INTERPOS62; RNA pol Rpb2 7; 1.
INTERPOS66; RNA pol Rpb2 7; 1.
INTERPOS66; RNA POL BETA; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      28-FEB-2003 (Rel. 41, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
DNA-directed RNA polymerase beta chain (EC 2.
beta chain) (RNA polymerase beta subunit).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; Y19223; CAB65465.2; -. PDB; 1HQM; 07-FEB-01.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A., AND X-RAY CRYSTALLOGRAPHY MEDLINE=99428144; PubMed=10499798;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        or send an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        entities requires a
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Transferase; Transcription; DNA-directed RNA polymerase,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             D-structure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FUNCTION: DNA-dependent RNA of DNA into RNA using the fo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SIMILARITY: Belongs to the RNA polymerase beta chain family.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CATALYTIC ACTIVITY: N nucleoside
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                                                                                                                                                                                                                                                                                                                                           599
                       1-1996 (Rel. 33, Created)
1-1996 (Rel. 33, Last sequence update)
1-2004 (Rel. 43, Last annotation update)
1-2004 (Rel. 43, Last annotation update)
1-2005 (Protein Cpn10) (groES protein)
1-2005 OR CPN10 OR BP3496 OR BB0963 OR BPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity 6; Conserv
                                                                                                                                                                                                                                                                                                                                           EDGEVVKVD
                                                                                                                                                                                                                                                                                                                                                                                            EDGQVMDVD
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1119 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                      STANDARD;
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66.7%;
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Pred. No.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Parkhill J., Sebaihia M., Preston A., Murphy L.D., Thomson N., Harris D.E., Holden M.T.G., Churcher C.M., Bentley S.D., Mungall K.L., Cerdeno-Tarraga A.M., Temple L., James K., Harris B., Quail M.A., Atkin R., Baker S., Basham D., Bason N., Cherevach I., Chillingworth T., Collins M., Cronin A., Davis P., Doggett J., Chillingworth T., Goble A., Hamlin N., Hauser H., Holroyd S., Jagels K., Leather S., Moule S., Norberczak H., O'Neil S., Ormond D., Price C., Rabbinowitsch E., Rutter S., Sanders M., Saunders D., Seeger K., Unwin L., Whitehead S., Barrell B.G., Maskell D.J., "Comparative analysis of the genome sequences of Bordetella pertussis, Bardetella parapertussis and Bordetella bronchiseptica.";
Nat. Genet. 35:32-40(2003).
                                                                                                                                                                                                                                                                                  Prodom; PD000566; Chaprnin_Cpn10; 1.
PROSITE; PS00681; CHAPERONINS_CPN10; 1.
                                                                                                                                                                                                                                                                                                                                                   HAMAP; MF_00580; -; 1.
InterPro; IPR001476; Caprnin_Cpn10.
Pfam; PF00166; cpn10; 1.
PRINTS; PR00297; CHAPERONIN10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; U12277, AAA74966.1; ---
EMBL; BX640421; CAB33757.1; --
EMBL; BX640439; CAB31462.1; --
EMBL; BX640425; CAE40278.1; --
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STRAIN=Tohama I / ATO
                                                                                                                                                                                                                                                               Chaperone;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PIR; 140330; 140330.
HSSP; P05380; 1AON.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              entities requires a license agreement (Sor send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               the ATPase activity of the latter.
-!- SUBUNIT: Heptamer of 7 subunits arranged in a ring
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                                                                                                                                                                                                                                      SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -!- FUNCTION: Binds to Cpn60 in the presence of Mg-ATP and suppresses
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=22827954; PubMed=12910271;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=520,
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                                                                                                                                               Similarity
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                                                                                                                                                                                                                    Complete proteome.
95 AA; 10272 MW; 210A938AF6780D38 CRC64;
                                                                                                                Conservative
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ATCC BAA-589 / NCTC 13251, RB50 / ATCC BAA-588,
                                                                                                                                         68.1%;
55.6%;
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50S ribosomal
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HAMAP; ME 00369; -; 1.

InterPro; IPR001147; Ribosomal L21e.

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InterPro; Ribosomal L21e; 1.
                                                                                                                                                                                                                                                   Ribosomal protein; SEQUENCE 97 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fritz H.-J., Gottschalk G.;
"The genome of Methanosarcina mazei: evidence for lateral gene transfer between Bacteria and Archaea.";
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
STRAIN-GOel / Gol / ATCC BAA-199 / DSM 3647 /
MEDLINE-22120827; PubMed=12125824; Merk! !
                                                                                                                                                                                                                                                                                                               PROSITE; PS01171; RIBOSOMAL_L21E; FALSE_NEG
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the European Bioinformatics Institute.
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SIMILARITY: Belongs to the L21E family of ribosomal proteins.
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                                                                                                                           Similarity 5; Conserv
EDGQMVHID
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PRELIMINARY; PRT; 118 AA.

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AC Q9HPC3; PRT; PRT; PRT; PRT; PRT;

AC Q1; Q1000540; PRT; PRT; PRT;

AC Q1; Q1000540; PRT; PRT; PRT;

AC Q1; Q1000540; PRT; PRT; PRT;

AC Q2; Q1000540; PRT; PRT;

AC Q3; Q1000540; PRT; PRT;

AC Q3; Q1000540; PRT; PRT;

AC Q4; Q1000540; PRT; PRT;

AC Q5; Q1000540; PRT;
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Best Local (
                        Q7X6W5
Q7X6W5;
Q1-OCT-2003
01-OCT-2003
01-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                   "Complete genome sequence and comparative analysis of the industrial microorganism Streptomyces avermitilis.";

Nat. Biotechnol. 21:526-531(2003).

EMBL; AP005047; BAC74297.1; -...
GO; GO:0005622; C:intracellular; IEA.
GO; GO:0005622; C:intracellular; IEA.
GO; GO:0003700; F:transcription factor activity; IEA.
GO; GO:000375; P:regulation of transcription, DNA-dependent; IEA.
InterPro; IPR000524; HTH_GRIR.
Pfam; PF00392; gntR; 1.
PRINTS; PR00035; HTHGNTR.
SMART; SM00345; HTHGNTR. 1.
Complete profesome.
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SEQUENCE
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MEDLINE=21477403; PubMed=11572948;
Omura S., Ikeda H., Ishikawa J., Hanamoto A., Takahashi C.,
Shinose M., Takahashi Y., Horikawa H., Nakazawa H., Osonoe T
Kikuchi H., Shiba T., Sakaki Y., Hattori M.;
"Genome sequence of an industrial microorganism Streptomyces avernitilis: deducing the ability of producing secondary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Streptomyces avermitilis.
Bacteria; Actinobacteria; Actinobacteridae; Actinomycetales; Streptomycineae; Streptomycetaceae; Streptomyces.
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OSJNBb0086GI3.4 protein
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STRAIN=MA-4680
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(TrEMBLrel. 24, Last sequence update)
(TrEMBLrel. 25, Last annotation update)
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(OSJNBa0088K19.15 protein).
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Pred. No. 33;
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AC Q8
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FURTHER S.Y., Ren S.X., LV G., Lin W., Gu W.O., Zhu G.F., Tu Y.F.,

Jia J., Yin H.F., Zhang Y., Cai Z., Chen J., Kang H., Chen X.Y.,

Shao Y., Sun Y., Hu Q.P., Zhang X.L., Zhang W., Wang L.J., Ding C.W.,

Sheng H.H., Gu J.L., Chen S.T., Ni L., Zhu F.H., Han B., Feng Q.,

Sheng Y.C., Li Y., Zhu J.J., Zhao Q., Hu X., Liu Y.L., Mu J., Yu Z.,

Chen L., Fan D.L., Weng Q.J., Zhang L., Lu Y.Q., Yu S.L., Liu X.H.,

Lu T.T., Zhang Y.J., Lu Y., Li C., Li T., Zhang Y., Hu H., Jia P.X.,

Qian Y.M., Ying K., Zhou B., Chen Z.H., Hao P., Zhang L., Wu M.,

Zhang R.Q., Guan J.P., Hong G.F.;

Submitted (SEP-201) to the EMBL/GenBank/DDBJ databases.

EMBL; AL606706; CAD41026.1; -.

EMBL; AL60678; CAD31213.1; -.
              Q8SD42;
Q8SD42;
01-JUN-2002
01-JUN-2002
01-JUN-2002
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Oryza sativa (Rice).
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Enrhartoideae; Oryzeae; Oryza.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nicotiana tabacum (Common tobacco).
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; aster.
lamiids; Solanales; Solanaceae; Nicotiana.
                                                                                                                                                                                                                                                                                                                                        Pfam; PH
                                                                                                                                                                                                                                                                                                                                                     Biermann B.J., Price J.R., Crowell D.N., Randa
"A collection of cDNAs encoding isoprenylated
submitted (JUL-1996) to the EMBL/GenBank/DDBJ
EMBL; U64925; AAD09518.1; -.
HSSP; P02649; ILE4.
InterPro; IPR066793; AIG1.
Pfam; PF04548; AIG1; 1.
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01-MAY-1999 (TrEMBLrel. 10,
01-MAY-1999 (TrEMBLrel. 10,
01-JUN-2003 (TrEMBLrel. 24,
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                  (TrEMBLrel. (TrEMBLrel. (TrEMBLrel.
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66.7%;
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Q9N595;
01-OCT-2000
                                                                                                                                                                                                        Submitted (SEP-2001) to the E
EMBL; AC006708; AAF60430.2; -
WOrmPep; Y110A7A.16; CE28103.
InterPro; IPR008849; IKI3.
Pfam; PF04762; IKI3; 1.
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STRAIN=Bristol N2;
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                                                                                                                                                                  Hypothetical protein. SEQUENCE 1250 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted
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Ozersky P., Wohldmann P.,
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NCBI_TaxID=6239;
                                                                                                                                                                                                                                                                                                                                                         Waterston R.;
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01-OCT-2003
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=21914557; PubMed=11916376;
Mesyanzhinov V.V., Robben J., Grymonprez B., Kostyuchenko V.A.,
Bouzkaltseva M.V., Sykilinda N.N., Krylov V.N., Volckaert G.;
"The genome of bacteriophage phiKZ of Pseudomonas aeruginosa.";
Mol. Biol. 317:1-19(2002).
                                                                                                                                                                                                                                                                                                                            "Direct Submission.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        investigating biology. The C
Science 282:2012-2018(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE=99069613; PubMed=9851916;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Genome sequence of the nematode C. elegans: a platform for investigating biology. The C. elegans Sequencing Consortium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
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                                                                                              Local
                                                                                                                                                                                                                                                                                                                                                                                                                                       sky P., Wohldmann P., Carter T.;
sequence of C. elegans cosmid Y110A7A.";
itted (MAR-1999) to the EMBL/GenBank/DDBJ databases.
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(TrEMBLrel. 18,
(TrEMBLrel. 25,
                                                                        Conservative
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100.0%; Pr
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66.7%;
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Caenorhabditis.
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                                                                 Score 37; DB 5; Louis Pred. No. 2.9e+02; 3; Mismatches 0;
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V., Volckaert G.;
                                                                                                            Length 1250;
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Q8LFR0;
01-OCT-2002 (TrEMBLrel. 2
01-OCT-2002 (TrEMBLrel. 2
01-OCT-2003 (TrEMBLrel. 2
Hypothetical protein.
                 "Full-Length cDNA from Arabidopsis thaliana. Submitted (MAR-2002) to the EMBL/GenBank/DDE EMBL; AV084697; AAM61258.1; -. InterPro; IPR008938; ARM.
InterPro; IPR003613; Znf_modRING.
Pfam; PF04564; U-box; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Arabidopsis thaliana (Mouse-ear cress).

Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids;
eurosids II; Brassicales; Brassicaceae; Arabidopsis.
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                                                                                                                                                                                                                                                                                                                                                                                                         annotation.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=3702;
                                                                                                                                                                                                                                      Feldmann K.;
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Kuipers O.P., Leer R., Tarchini R., Peters S.A., S.
Fiers M.W.E.J., Stiekema W., Klein Lankhorst R.M.,
Hoffer S.M., Nierop Groot M.N., Kerkhoven R., De V.
De Vos W.M., Siezen R.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Complete genome sequence of Lactobacillus plantarum WCFS1."; Proc. Natl. Acad. Sci. U.S.A. 100:1990-1995(2003).
EMBL; AL935258; CAD64640.1; -.
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STRAIN-NCIMB 8826 / WCFS1;
MEDLINB-22480296; PubMed-12566566;
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Pfam; PF00991; ParA; 1.
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Lactobacillus plantarum.
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                                                                                                                                                                                                                                                           Lu Y.-P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Salzberg S
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                                                                                                                                                                                                                                                                                                                                                                                                                                  improve
                                                                                                                                                               databases
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                                                                                                                                                                                                                                                               Flavell R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alexandrov
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Sandbrink H.M.,
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Complete genomic sequence of Corynebacterium submitted (MAX-2002) to the EMBL/GenBank/DDBJ EMBL, AP005279; BAB99026.1; -. Go; Go:0005663; C:DNA replication factor C cor Go; Go:0005524; F:ATP binding; IEA. GO; GO:0003677; F:DNA binding; IEA. GO; GO:0004386; F:helicase activity; IEA. GO; GO:0006260; P:DNA replication; IEA. GO; GO:0006260; P:DNA ATPase centr. InterPro; IPR003959; AAA, ATPase centr. AAA; I. Helicase; Complete proteome. SEQUENCE 459 AA; 49478 MW; 8965BDF6A27594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
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Best Local
SEQUENCE FROM N.A.
Rieger M., Gabel C., Mu
Mewes H.W., Lemcke K., L
Submitted (NOV-1999) to
[2]
                                                                                                                                                                                                                                                                    Q9M2X7;
01-OCT-2000 (TrEMBLrel. 1
01-OCT-2000 (TrEMBLrel. 1
01-OCT-2003 (TrEMBLrel. 2
Hypothetical protein.
T16K5.160.
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STRAIN=ATCC 13032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Corynebacterium glutamicum (Brevibacterium flavum).
Bacteria; Actinobacteria; Actinobacteridae; Actinomycetales;
Corynebacterineae; Corynebacteriaceae; Corynebacterium.
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01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
Uncharacterized ATPase related to the helicase subunit of the holliday
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q8NQ21;
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                                                                                                                                                                                           Arabidopsis thaliana (Mouse-ear cress).
Eukaryota; Viridiplantae; Streptophyta; Embry
Spermatophyta; Magnoliophyta; eudicotyledons;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=1718;
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nes 6; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                76.6%;
75.0%;
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66.7%;
                           Mueller-Auer S., Schaefer M., Zipp M., ..., Mayer K.F.X., Quetier F., Salanoubat M.; to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                    15,
15,
25,
                                                                                                                                                                           Brassicaceae;
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Last sequence update)
Last annotation update)
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Pred. No. 1.5e+02;
2; Mismatches 0
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Pred. No. 1.5e
2; Mismatches
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1;
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                                                                                                                                                                           Arabidopsis.
                                                                                                                                                                                                                         Embryophyta; Tracheophyta;
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RESULT 12
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Submitted (JAN-2000) to the EMBL/GenBank/DDBJ
EMBL; AL132965; CAB66919.1; -.
PIR; T46047; T46047.
InterPro; IPR008938; ARM.
InterPro; IPR008938; ARM.
InterPro; IPR00813; Znf_modRING.
Pfam; PF04564; U-box; 1.
SMART; SM00504; Ubox; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Yanagawa Y., Hasezawa S., Kumagai F., Fujimuro M., Yokosaw Tanaka K., Komamine A., Hashimoto J., Sato T., Nakagawa H. "Colocalization of proteasome subunits and plant specific microtubules, preprophase bands and phragmoplast, during c Submitted (AUG-1999) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Oryza sativa (Rice).
Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Ehrhartoideae; Oryzeae; Oryza.
MCBI_TaxID=4530;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-MAR-2002
01-MAR-2002
01-OCT-2003
                                                                                                                               01-OCT-2003
01-OCT-2003
01-OCT-2003
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Q8W426;
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                                                                                                                                                                                           Q7XJ14
Q7XJ14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro; IPR000717; PCI.
InterPro; IPR008941; TPR-like.
Pfam; PF01399; PCI; 1.
SMART; SM00088; PINT; 1.
SEQUENCE 487 AA; 54980 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OS21D7.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRAIN=cv. Nipponbare;
Yanagawa Y., Hasezawa S.,
Yanaka K., Komamine A., H
                      Oryza sativa (japonica cultivar-group).
Eukaryota; Viridiplantae; Streptophyta; En
Spermatophyta; Magnoliophyta; Liliopsida;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gramene; Q8W426;
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    Spermatophyta;
Ehrhartoideae;
                                                                                    Putative 26S proteasome P0478E02.12.
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(TrEMBLrel.:
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                                                                                                                               (TrEMBLrel.
                                                                                                                                                                                                                      PRELIMINARY;
                                                                                                                                                                         (TrEMBLrel.
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75.0%;
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Last annotation updat
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Last annotation update)
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Pred. No. 1.
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Pred. No. 1.6e+02
                                                                                                                                                                                                                        PRT;
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1.6e+02;
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                                                                                                                                                                                                                        487
                             Embryophyta; Tracheophyta;
a; Poales; Poaceae;
                                                                                                                                                                                                                                                                                                                                                                                                               les 2;
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RESULT 14
P91775
ID P9177
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  P91775;
P91775;
01-MAY-1997
01-MAY-1997
01-OCT-2003
                                                                                                                                                                                                                                          Gramene, OBLOGI; -
Gramene, OBLOGI; -
GO; GO:0008233; F:peptidase activity; IEA.
GO; GO:0004872; F:receptor activity; IEA.
GO; GO:0006509; F:receptor activity; IEA.
InterPro; IPR003137; PA.
InterPro; IPR006639; Peptidase A22.
InterPro; IPR006639; Peptidase A22B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q8LQG1;
Q8LQG1;
01-OCT-2002
01-OCT-2002
                                                                                                                                                                                         Receptor.
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                            STRAIN=Cv.
                                                                                                                                                                                                                                                                                                                                                                                                                       Oryza sativa (japonica cultivar-group).
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
Ehrhartoideae; Oryzeae; Oryza.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRAIN=cv. Nipponbare;
Oliveira A.C., Mattos L.T., Carvalho F.F.,
Malone G., Dellagostin O.;
"Oryza sativa nipponbare genomic DNA, chrorolone:P0478E02.";
clone:P0478E02.";
                                                                                                                                                                                                                                                                                                                        EMBL; AP003433; BAB92664.1;
                                                                                                                                                                                                                                                                                                                                    Submitted (MAR-2001) to the
                                                                                                                                                                                                                                                                                                                                                clone: P0004D12.
                                                                                                                                                                                                                                                                                                                                                        Sasaki T., Matsumoto T., Yamamoto K.; "Oryza sativa nipponbare(GA3) genomic
                                                                                                                                                                                                                                                                                                                                                                   STRAIN=cv. Nipponbare;
Sasaki T., Matsumoto T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Vacuolar sorting receptor-like P0004D12.8.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted (APR-2003) to the EMBL/GenBank/DDBJ databases EMBL; AB109206; BAC79193.1; -.
                                                                                                                                                                                                            SMART; SM00730;
                                                                                                                                                                                                                          Pfam; PF04258;
                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=39947;
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(TrEMBLrel. 22, Last sequence up
(TrEMBLrel. 25, Last annotation
 (TrEMBLrel. 03, (TrEMBLrel. 03, (TrEMBLrel. 25,
                                                                                                                                              Conservative
                                              PRELIMINARY;
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                                                                                                                                                                                         AA;
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77.8%;
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Pred. No. 2e+0
1; Mismatches
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Last annotation update)
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Pred. No.
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                                             PRT;
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Mismatches 2
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SIGNAL
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PROSITE;
                                                                                                                                    reveals hypervariable sequences.",
Nature 403:665-668(2000).
EMBL; AL139075; CAB75104.1; -.
PIR; E81391; E81391.
InterPro; IPR000595; cNMP_binding.
Pfam; PF00027; cNMP_binding; 1.
                                                                                                                                                                                                                                                                                                                        STRAIN=NCTC 11168;

MEDLINE=20150912; PubMed=10688204;

Parkhill J., Wren B.W., Mungall K., Ketley J.M., Churcher C.,

Parkhill J., Wren B.W., Davies R.M., Feltwell T., Holroyy

Basham D., Chillingworth T., Davies R.M., Feltwell T., Holroyy

Jagels K., Karlyshev A.V., Moule S., Pallen M.J., Penn C.W.,

Quail M.A., Rajandream M.A., Rutherford K.M., van Vliet A.H.M.
                                                                                     SMART; SM00100; cNMP; 1.
prosite; ps50042; cNMP_binding_3;
                                                                                                                                                                                                                                                                              Quail M.A., Rajandream M.A., Rutherford K.M., van Vliet A.H.M., Whitehead S., Barrell B.G.; "The genome sequence of the food-borne pathogen Campylobacter jejuni
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-OCT-2000 (TrEMBLrel. 01-JUN-2003 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q9PI42;
01-OCT-2000
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EMBL; U81824; AAC64660.1; -.

HSSP: P56410; 1AOV.
                                                                      Complete proteome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Campylobacteraceae;
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Bacteria; Proteobacteria;
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GO; GO:0008199; F:ferric iron binding; IEA.
GO; GO:0006879; P:iron ion homeostasis; IEA.
GO; GO:0006826; P:iron ion transport; IEA.
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Pacifastacus Ieniusculus (Signal crayfish).

Pacifastacus Ieniusculus (Signal Crayfish).

Eukaryota, Metazoa; Arthropoda; Crustacea; Malacostraca;

Eumalacostraca; Eucarida; Decapoda; Pleocyemata; Astacidea;

Astacoidea; Astacidae; Pacifastacus.
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Pfam; PF00405; transferrin;
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; SM00096; TRANSFERRIN_2; 1
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                                               23221 MW;
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Score
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W; 5EF1706133350E99 CRC64;
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Search completed: August 23, 2004, 10:39:55 Job time : 118 secs	Qy 1 EDGQVMDVD 9 ::::: Db 83 EDGEILEID 91	Best Local Similarity 44.4%; Pred. No. 97; Matches 4; Conservative 5; Mismatches
		0;
		Indels
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Minimum DB
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Listing first 45 summaries
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

5971 P1 mimot	AAB25971	ω	20	100.0	47	25
25921 P1 mim	2592	ω	20	100.0	47	24
0542 Human	ABJ00542	ហ	16	00.	47	23
Human	ABJ00540	ហ	14	00.	47	22
Human	ABJ00226	v	13	100.0	47	21
Abj00224 Human IqE	ABJ00224	ហ	13	00.	47	20
Human	ABJ00312	σı	13	00.	47	19
641 Peptide	AAU16641	4.	13	00.	47	1 60
9 Peptide	AAU16639	4	13	00.	47	7
2 Peptide	AAU16642	4,	13	100.0	47	16
1028 IGE pept	102	4	13	00.	47	15
2 Ant	AAB20872	w	13	00.	47	14
5917 P1 mimot	AAB25917	w	13	100.0	47	13
P1 mimot	AAB25914	w	13	.00	47	12
01	AAB25916	w	13	.00	47	11
Adel0902 Chimeric	ADE10902	7	10	100.0	47	10
ω	ABJ00228	σ	10	00.	47	9
Рe	AAU16654	4	10	100.0	47	000
9	AAB25929	ω	10	•	47	7
Adel0893 Chimeric	ADE10893	7	9	00.	47	on
7	ABJ00217	G	9	•	47	, UT
2 Peptide	AAU16632	4	9	100.0	47	4
IGE per	AAB51023	4	9	100.0	47	· W
0867 Immunoql	AAB20867	w	9	00.	47	2
25907 IqE C-ep	AAB25907	w	9	100.0	47	ш
Description	ID	B	Length	Match	Score	No.
				Ouerv		Result
	SUMMARIES			,		

Dyson M, F: Randall R,

Friede M,

Greenwood J, Hewitt E, Lamont A, Mason S; WG, Van Mechelen MP, Vinals Y De BassolsC;

WPI; 2000-572073/53.

Claim 2; Page 5; 129pp; English

Peptides useful for treating, preventing and ameliorating allergic diseases, comprising an isolated surface exposed group of a specific domain from immunoglobulin ${\tt E}. \\$

4.5	44	43	42	41	40	39	38	37	36	ω 	34	ι ω ω	32	31	30	29	28	27	26
47	47	47	47	47	47	47	47	47	4.7	47	47	47	47	47	47	47	47	47	47
100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
236	128	106	98	22	22	22	22	21	21	21	21	21	21	20	20	20	20	20	20
9	σ	2	N	u	ഗ	4	w	v	Ŋ	4	4.	ω	w	տ	ر.	σ	4	4	ω
ABG74780	ABG74778	AAR85587	AAR85588	ABJ00315	ABJ00543	AAU16645	AAB25920	ABJ00317	ABJ00359	AAU16647	AAU16697	AAB25922	AAB25972	ABJ00358	ABJ00316	ABJ00544	AAU16696	AAU16646	AAB23440
Human			Aar85588 Fc(epsilo		Human Iq		-			•	Aau16697 Peptide P	Aab25922 P1 mimoto	P1 mi		Human			Aau16646 Peptide P	Aab23440 Human IgE

ALIGNMENTS

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RESULT 1
AAB25907
ID AAB2
XX AAB2
XX AAB2
XX DT 05-J
XX Epit
KW Epit
KW alle
XX Homo
XX WO20
PN 31-A
XX 25-F
PR 29-M
PR 07-M
P
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29-MAR-1999
07-MAY-1999
07-MAY-1999
07-AUG-1999
07-AUG-1999
07-SEP-1999
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07-SEP-1999
29-OCT-1999
23-NOV-19999
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22-FEB-2000; 2000WO-EP001455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        31-AUG-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 allergy; atopy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IgE C-epsilon-2 domain surface exposed epitope peptide P1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  05-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAB25907;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99GB-00018603.
99GB-00021046.
99GB-00021047.
99GB-00025619.
99GB-00027698.
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99GB-00010537.
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RESULT 2
AAB20867
CC The present invention describes a peptide (I) comprising an isolated CC surface exposed group/epitope (EI) of C-epsilon-2 domain (D) of CC immunoglobulin E (IgB), or its mimotope. Also described are: (1) an CC immunogen (II) for treating allergy comprising (II); (2) a vaccine (III) CC for treating allergies comprising (II); (3) a liquand (IV) capable of CC recognising EI; (4) a pharmaceutical composition (PC) comprising (IV); (6) an immunogen (CC (S) a peptide (Ia) capable of being recognised by (IV); (6) an immunogen (CC (IIa) comprising (IA), and (7) producing (III) by producing (II) can compare the comprising (II), and (III) are useful compositione and histamine release inhibitor. (I), (II) and (III) are useful compreventing allergies. (IV) is useful for identifying mimotopes of P1, in medicine and also in manufacturing medicaments for treating allergies. (CC (I) is useful in diagnostics and in the affinity purification of correctlating anti-IgE antibodies from blood. (I), (III) and PC are useful correctlating apatient susceptible to or suffering from allergies. (IV) is also useful in diagnosing atopy. AAB25907 to AAB2609 represent peptide sequences which are used in the exemplification of the present
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
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Best Local
                                                                                                                                                                                                                                                                            25-FEB-1999;
25-FEB-1999;
25-FEB-1999;
13-AUG-1999;
                                                                                    Immunogens and vaccine comprising the immunogen useful for preventing treating infectious diseases e.g. malaria and chronic disease e.g. cancer, comprises peptide and carrier from protein D of influenzae.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protozoacide;
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                                                                                                                                                                                                                                                                                                                                                                        22-FEB-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          prostate cancer; Haemophilus influenzae; vaccine; infectious disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Immunoglobulin E; IgE; immunogenic; immunogen; Protein D; carrier;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Immunoglobulin E
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                                                                                                                                                                                                                                         (SMIK ) SMITHKLINE BEECHAM BIOLOGICALS.
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9; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cytostatic;
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99GB-00004412.
99GB-00019260.
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                                                                                                                                                                                                                                                                                                                                  99GB-00004405
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                                                                                                                                                                                                      Van-Mechelen MP,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     antiallergic; nootropic; neuroprotective;
mer's disease; allergy.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 47; DB 3;
Pred. No. 1.4e+06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
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Claim 9;

Page 37; 53pp; English

The present invention

present invention describes an immunogen (I) and a carrier (Ib) derived from protein D o

I) comprising a of Haemophilus

peptide influenzae

Best Loc Matches

9

Conservative

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Gaps

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100.0%;

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AAB51023
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Best Local S
Matches
               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                or its fragment. Also described are: (1) a vaccine comprising (1), and a excipient; (2) preparation of (1), comprising conjugating a peptide to protein D or its fragment; and (3) preparation of a vaccine of (1), comprising formulating (I) with an excipient. (I) has cytostatic, comprising formulating (I) with an excipient. (I) has cytostatic, antiallergic, nootropic, neuroprotective and protozoacide activities. (I and the vaccine are useful for the manufacture of a medicament for preventing and treating infectious diseases such as malaria or chronic disease such as cancer, Alzheimer's disease or allergy in a patient. Unlike prior art immunogens, (I) induces high levels of antipeptide immune responses while inducing a moderate humoral response against the
                                                                                             The present invention relates to a composition comprising allergy peptides linked by an inert carrier. The allergy peptides are derived from Immunoglobulin E (ISB) or ISE receptor. The present peptide is one such peptide from ISE. The composition is useful as a vaccine or for manufacturing a medicament for the prophylaxis or treatment of allergy. In particular, for boosting an anti-allergy immune response in an individual susceptible to an allergic response
                                                                                                                                                                                                                                                            New vaccine comprising allergy peptides linked by an inert carrier, useful for boosting an anti-allergy immune response in an individual susceptible to an allergic response.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   carrier. The present sequence represents a specifically claimed immunoglobulin E (IgE) epitope immunogenic peptide sequence, whused in an immunogen of the present invention
                                                                                                                                                                                                                             Claim 5; Page 20; 26pp; English.
                                                                                                                                                                                                                                                                                                                                WPI; 2001-091150/10
                                                                                                                                                                                                                                                                                                                                                                   Prieels J;
                                                                                                                                                                                                                                                                                                                                                                                                                                   08-JUN-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Vaccine; immunoglobulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IgE peptide #1.
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                                                                Sequence
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9; Conser
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Pred. No. 1.4e+06;
Score 47; DB 4;
Pred. No. 1.4e+06;
Mismatches 0;
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AAU16632
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                                                                            Query Match
Best Local
                                                               Matches
                                                                                                                                                                                                                  conjugation of compounds (e.g. peptides) to carrier vehicles (e.g. macromolecules, polymers, dendrimers, proteins) to produce biological and immunological constructs. The invention provides a method for linking an epitope (e.g. a peptide) to a carrier (e.g. a protein) for use in a pharmaceutical composition or a vaccine. The invention describes peptides derived from or mimotopes of the (Egsilon2, Cepsilon3 or Cepsilon4 regions of human immunoglobulin E (IgB) which are used to produce conjugated compounds. The compounds or compositions of the invention are useful in the manufacture of a mediated diseases. The invention allows for controlled conjugation of a mediated diseases. The invention allows for controlled conjugation of a
                                                                                                                         Sequence
                                                                                                                                                               peptide epitope (antigen) to a protein so as to form an immunogenic conjugate which may be able to raise a protective antibody response in animal or human patient. AAU16632-AAU16913 represent peptides derived from or mimotopes of the Cepsilon2/Cepsilon3/Cepsilon4 region of human
                                                                                                                                                                                                                                                                                                                                                                      The present invention relates to linkage methodology for use in the conjugation of compounds (e.g. peptides) to carrier vehicles (e.g.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       A linkage comprising an immunogenic conjugate useful treatment of mediated diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21-DEC-1999; 99GB-00030333
22-FEB-2000; 2000GB-00004096;
22-AUG-2000; 2000GB-00020707.
22-AUG-2000; 2000GB-00020708.
                                                                                                                                                                                                                                                                                                                                                                                                                             Example 4; Page 21; 48pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human; linkage technology; conjugated compound; carrier vehicle; epitope; Cepsilon2; Cepsilon3; Cepsilon4; immunoglobulin E; IgE mediated disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Peptide P1 derived from Cepsilon2 region of human IgE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Flinn N,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21-DEC-2000; 2000WO-GB004935.
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 Н
                                                           Similarity 9; Conserv
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SMITHKLINE BEECHAM BIOLOGICALS.
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EDGQVMDVD
                            EDGQVMDVD 9
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                                                                                                                          ΑA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Johnson T;
                                                        100.0%; Score 47; DB 4; ilarity 100.0%; Pred. No. 1.4e+06; Conservative 0; Mismatches 0;
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                                                                                      Length 9;
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RESULT 5

21-FEB-2003; 2003US-00372076

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RESULT 6
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ID ABJ0
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Best Local &
                                                                                                                                                                                                                                                                                                                                   hepatotropic; virucide; antiinflammatory; chronic hepatitis; vaccine; recombinant hepatitis B core chimeric protein; HBc chimeric protein; hepatitis B infection; T-cel stimulator; B-cell epitope.
                                                                                                                                                                                                                                                                              Homo
                                                                                                                  23-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Chimeric hepatitis B virus related B-cell epitope segid 127.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29-JAN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADE10893;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADE10893 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present invention relates to conjugates suitable for use in vaccine where the conjugate comprises a disulphide bridge cyclised peptide and immunogenic carrier. The vaccines can be used in the treatment of allergies. The present sequence is a peptide immunogen derived from hum immunoglobulin E (IGE) suitable to be cyclised and used in the inventic
                                                                                                                                                                                            US2003198645-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 4; Page 9; 45pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conjugate for use in vaccine for treatment of allergy, condisulfide bridge cyclized peptide and immunogenic carrier
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2002-489648/52.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (SMIK )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ABJ00217 standard; peptide; 9 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          22-AUG-2000; 2000GB-00020717.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Immunogen; human; IgE; immunoglobulin E; allergy; thio-ether linkage;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human IgE immunogenic peptide SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            02-SEP-2002
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABJ00217;
                                                                                                                                                                                                                                                                      sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity 9; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SMITHKLINE BEECHAM BIOLOGICALS. PEPTIDE THERAPEUTICS LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EDGOVMDVD
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9
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Pred. No. 1.4
D; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1.4e+06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1.
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ptide and an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      from human invention
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RESULT 7
AAB25929
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The invention describes a method of treating chronic hepatitis comprising administering to a patient a T cell-stimulating amount of a vaccine comprising immunogenic particles dissolved or dispersed in a diluent, where the immunogenic particles consists of recombinant hepatitis B core (HBC) chimeric protein molecules, and maintaining the patient to induce T cells activated against HBC. The methods and compositions of the present invention are useful for treating chromic hepatitis B virus related B-cell epitope useful for expression within the HBV chimer at the N-terminus, within the immunoigenic loop and/or at the C-terminus.
           25-FEB-1999;
29-MAR 1999;
07-MAY-1999;
07-MAY-1999;
07-AUG-1999;
07-AUG-1999;
07-SEP-1999;
07-SEP-1999;
07-SEP-1999;
29-OCT-1999;
29-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Treating chronic hepatitis B infection by administering a T cell-stimulating vaccine containing immunogenic particles having recombinant carboxy-terminal truncated hepatitis B core (HBc) chimeric protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      molecules.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21-FEB-2002; 2002US-00080299.
21-FEB-2002; 2002US-00082014.
                                                                                                                                                                                                                                              immunosuppressive;
allergy; atopy.
                                                                                                                                                                                                                                                            Epitope; mimotope; human; immunoglobulin E; IgE; C-epsilon-2 domain; allergic disease; immunoprophylaxis; immunotherapy; antiallergic; immunosuppressive; vaccine; histamine release inhibitor; immunogen;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Disclosure; SEQ ID NO 127; 111pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2003-852775/79
                                                                                                                                                                          31-AUG-2000
                                                                                                                                                                                                                                                                                                            P1 mimotope
                                                                                                                                                                                                                                                                                                                                    05-JAN-2001
                                                                                                                                                                                                                                                                                                                                                             AAB25929;
                                                                                                                                                                                                                                                                                                                                                                                    AAB25929 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 9
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                                                                                                                                                 22-FEB-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity 9; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Friede M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EDGQVMDVD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AA;
                                                                                                                                                                                                                                                                                                            peptide
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                                                                                                                                                    2000WO-EP001455
                     99GB-00010538.
99GB-00018594.
99GB-00018603.
99GB-00021046.
99GB-00021047.
99GB-00025619.
                                                                                                                           99GB-00004405.
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                                                                                                              -00007151
                                                                                                   -00010537.
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Pred. No.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1.4e+06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 9;
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RESULT 8
AAU16654
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
Matches 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Dyson M,
Randall 1
             21-DEC-1999;
22-FEB-2000;
22-AUG-2000;
22-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Peptides useful for treating, preventing diseases, comprising an isolated surface domain from immunoglobulin E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Dyson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (SMIK )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The present invention describes a peptide (I) comprising surface exposed group/epitope (E1) of C-epsilon-2 domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Disclosure; Page 9; 129pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2000-572073/53
                                                                                                                                                                                                                       Human, linkage technology; conjugated compound; carrier vehicle; epitope; Cepsilon2; Cepsilon3; Cepsilon4; immunoglobulin E; IgE mediated disease;
                                                                                                                                                                                                                                                                                                                                                 AAU16654 standard; peptide; 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                               Peptide P15t derived as mimotope of Cepsilon2 region of human IgE
                                                                                                                                                                                                                                                                                                                        AAU16654;
                                                                                  21-DEC-2000;
                                                                                                              28-JUN-2001
                                                                                                                                          WC200145745-A2
                                                                                                                                                                    Synthetic
                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                            antibody response.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SMITHKLINE BEECHAM BIOLOGICALS: PEPTIDE THERAPEUTICS LTD.
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9; Conser
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Turnell
                                                                                                                                                                                                                                                                                                                                                                                                                        EDGQVMDVD
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milarity 100.0%;
Conservative 0;
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             99GB-00030233.
2000GB-00004096.
2000GB-00020707.
2000GB-00020708.
                                                                                    2000WO-GB004935
                                                                                                                                                                                                                                                                                              (first
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                                                                                                                                                                                                                                                                                               entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                    A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     and ameliorating exposed group of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         E, Lamont A, Mason S
Vinals Y De BassolsC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      allergic
a specific
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RESULT 9
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Best Local S
Matches 9
              Conjugate for use in vaccine for treatment of allergy, comprises disulfide bridge cyclized peptide and immunogenic carrier.
                                                                                                                                                                  Friede M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mediated diseases. The invention allows for controlled conjugation of a peptide epitope (antigen) to a protein so as to form an immunogenic conjugate which may be able to raise a protective antibody response in an animal or human patient. AAUI6632-AAUI6913 represent peptides derived from or mimotopes of the Cepsilon2/Cepsilon3/Cepsilon4 region of human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The present invention relates to linkage methodology for use in the conjugation of compounds (e.g. peptides) to carrier vehicles (e.g. macromolecules, polymers, dendrimers, proteins) to produce biological and immunological constructs. The invention provides a method for linking an epitope (e.g. a peptide) to a carrier (e.g. a protein) for use in a pharmaceutical composition or a vaccine. The invention describes peptides derived from or mimotopes of the Cepsilon2, Cepsilon3 or Cepsilon4 regions of human immunoglobulin E (IgE) which are used to produce conjugated compounds. The compounds or compositions of the invention are useful in the manufacture of a medicament for the treatment of IgE mediated diseases.
                                                                                                        WPI; 2002-489648/52
                                                                                                                                                                                                                                                                                                                                                              17-AUG-2001; 2001WO-EP009576
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IgE immunogenic peptide SEQ ID NO:
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                                                                                                                                                                                                                   SMITHKLINE BEECHAM BIOLOGICALS. PEPTIDE THERAPEUTICS LTD.
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SMITHKLINE BEECHAM BIOLOGICALS.
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                                                                                                                                                            Mason S,
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                                                                                                                                                                 The invention describes a method of treating chronic hepatitis comprising administering to a patient a T cell-stimulating amount of a vaccine comprising immunogenic particles dissolved or dispersed in a diluent, where the immunogenic particles consists of recombinant hepatitis B core (HBC) chimeric protein molecules, and maintaining the patient to induce T cells activated against HBC. The methods and compositions of the present
   Sequence 10
                                                       invention are useful for treating chromic hepatitis B infection. This the amino acid sequence of a chimeric hepatitis B virus related B-cell epitope useful for expression within the HBV chimer at the N-terminus, within the immunoigenic loop and/or at the C-terminus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Treating chronic hepatitis B infection by administering a T cell-stimulating vaccine containing immunogenic particles having recombinant carboxy-terminal truncated hepatitis B core (HBc) chimeric protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      hepatotropic; virucide; antiinflammatory; chronic hepatitis; vaccine; recombinant hepatitis B core chimeric protein; HBc chimeric protein; hepatitis B infection; T-cel stimulator; B-cell epitope.
                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; SEQ ID NO 136; 111pp; English.
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(FRIE/)
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21-FEB-2002; 2002US-00082014.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29-JAN-2004 (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present invention relates to conjugates suitable for use in vaccines, where the conjugate comprises a disulphide bridge cyclised peptide and an immunogenic carrier. The vaccines can be used in the treatment of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21-FEB-2003; 2003US-00372076
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Chimeric hepatitis B virus related B-cell epitope seqid 136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 4; Page 9; 45pp; English.
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Pred. No.
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Query Match Best Local Similarity

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                                        The present invention describes a peptide (I) comprising an isolated surface exposed group/epitope (E1) of C-epsilon-2 domain (D) of C immunoglobulin E (19E), or its mimotope. Also described are: (1) an immunogen (II) for treating allergy comprising (I); (2) a vaccine (III) for treating allergy comprising (II); (3) a ligand (IV) capable of recognising E1; (4) a pharmaceutical composition (PC) comprising (IV); (5) a peptide (Ia) capable of being recognised by (IV); (6) an immunogen (IIa) comprising (Ia); and (7) producing (III) by producing (II). (I) can have antiallergic and immunosuppressive activities, and can be used as a convactine and histamine release inhibitor. (I), (II) and (III) are useful in medicine and also in manufacture of medicaments for treating and compressive and in the affinity purification of concluding anti-19E antibodies from blood. (I), (III) and PC are useful contractive and antibodies from blood. (II), and PC are useful
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Randall R,
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29-OCT-1999;
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07-MAY-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              P1 mimotope peptide P15p SEQ ID NO:10.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAB25916 standard;
                                                                                                                                                                                                                                                                            Disclosure; Page 9; 129pp;
                                                                                                                                                                                                                                                                                                                       Peptides useful for treating, preventing and ameliorating allergic diseases, comprising an isolated surface exposed group of a specific
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            07-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       immunosuppressive; vaccine; histamine release inhibitor; immunogen;
    for treating a patient susceptible to or suffering from allergies. is also useful in diagnosing atopy. AAB25907 to AAB26099 represent peptide sequences which are used in the exemplification of the pre-
                                                                                                                                                                                                                                                                                                                                                                 2000-572073/53.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N
                                                                                                                                                                                                                                                                                                           from
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  sequences
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99GB-00010537.
99GB-00010538.
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99GB-00025619.
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99GB-00021046.
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                                                                                                                                                                                                                                                                                                                                                                                                                                         THERAPEUTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; human; immunoglobulin E; IgE; C-epsilon-2 doma immunoprophylaxis; immunotherapy; antiallergic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 peptide;
                                                                                                                                                                                                                                                                                                                                                                                            WG,
                                                                                                                                                                                                                                                                                                                                                                                                           Greenwood J,
                                                                                                                                                                                                                                                                                                                                                                                              Van Mechelen MP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                       BIOLOGICALS.
                                                                                                                                                                                                                                                                             English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13
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                                                                                                                                                                                                                                                                                                                                                                                              Hewitt E, Lamont A, Mason S
len MP, Vinals Y De BassolsC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IgE; C-epsilon-2 domain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
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                                                                                                                                                 immunogen
I). (I) can
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RESULT 12
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Best Local
                                                                                                                                                                                                                                                       Dyson M, E
Randall R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAB25914 standard; peptide; 13 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 13
The present invention describes a peptide (I) comprising an isolated surface exposed group/epitope (EI) of C-epsilon-2 domain (D) of immunoglobulin E (IGB), or its mimotope. Also described are: (1) an immunogen (II) for treating allergy comprising (I); (2) a vaccine (III) for treating allergies comprising (II); (3) a ligand (IV) capable of recognising EI; (4) a pharmaceutical composition (PC) comprising (IV); (5) a peptide (IA); and (7) producing (III) by producing (II). (1) can have antiallergic and immunosuppressive activities, and can be used as a vaccine and in the manufacture of medicaments for treating and preventing allergies. (IV) is useful for identifying mimotopes of P1, in
                                                                                                                                                                                                                                                                                                                                                                   07-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                07-AUG-1999
                                                                                                                                                                                                                                                                                                                                                                                          07-AUG-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          allergy; atopy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    allergic disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       P1 mimotope peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                05-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAB25914;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              invention
                                                                                                                                                                                Peptides useful for treating, preventing diseases, comprising an isolated surface domain from immunoglobulin E.
                                                                                                                                                                                                                                                                                          (SMIK )
(PEPT-)
                                                                                                                                                                                                                                                                                                                                                       07-SEP-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                            29-MAR-1999;
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                                                                                                                                                         Claim 14; Page 9; 129pp; English.
                                                                                                                                                                                                                                WPI; 2000-572073/53.
                                                                                                                                                                                                                                                                                                                               23-NOV-1999;
                                                                                                                                                                                                                                                                                                                                            29-OCT-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         immunosuppressive; vaccine;
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9; Conser
                                                                                                                                                                                                                                                                                         SMITHKLINE BEECHAM BIOLOGICALS. PEPTIDE THERAPEUTICS LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EDGQVMDVD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mimotope;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EDGOVMDVD 11
                                                                                                                                                                                                                                                       Friede M, Greenwood,
Turnell WG, Van M
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                                                                                                                                                                                                                                                                                                                             99GB-00018594.
99GB-00018603.
99GB-00021046.
99GB-00021047.
99GB-00025619.
99GB-00027698.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  immunoprophylaxis; immunotherapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 human; immunoglobulin E; IgE; C-epsilon-2 domain;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         histamine release inhibitor; immunogen;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 47; DB 3
Pred. No. 0.02;
                                                                                                                                                                                                                                                          od J, Hewitt
Mechelen MP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ID NO:8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                             and ameliorating allergic exposed group of a specific
                                                                                                                                                                                                                                                          E, Lamont
Vinals Y |
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      antiallergic;
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                                                   immunogen
I). (I) can
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RESULT 13
AAB25917
ID AAB25
XX AAB25
XX AAB25
XX Epitc
XW Epitc
XW Epitc
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AN 22-FE
PR 29-MB
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PR 07-SE
PR 29-OC
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PR 07-MB
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Best Local S
Matches
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29-MAR-1999;
07-MAY-1999;
recognising E1; (4) a pharmaceutical composition (I) comprising the isolated surface exposed group/epitope (E1) of C-epsilon-2 domain (D) of immunoglobulin E (IgB), or its mimotope. Also described are: (1) an immunogen (II) for treating allergy comprising (I); (2) a vaccine (II) for treating allergies comprising (II); (3) a ligand (IV) capable of recognising E1; (4) a pharmaceutical composition (DA)
                                                                                                                                                                                                                               Peptides useful for treating, prediseases, comprising an isolated
                                                                                                                                                                 Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 07-SEP-1999;
29-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Epitope; mimotope; allergic disease; i
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               allergy; atopy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            P1 mimotope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          05-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           medicine and also in manufacturing medicaments for treating allergies.

(I) is useful in diagnostics and in the affinity purification of circulating anti-IgE antibodies from blood. (I), (III) and PC are useful for treating a patient susceptible to or suffering from allergies. (IV) is also useful in diagnosing atopy. AAB25907 to AAB26099 represent peptide sequences which are used in the exemplification of the present
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    immunosuppressive; vaccine; histamine
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                                                                                                                                                                 Page
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                                                                                                                                                                                                                                                                                                                                                                       Friede M,
                                                                                                                                                                                                               immunoglobulin
                                                                                                                                                                                                                                                                                                                                                    Turnell
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99GB-00010538.
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                                                                                                                                                             129pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       immunoprophylaxis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           human; immunoglobulin E; IgE; C-epsilon-2 domain; immunoprophylaxis; immunotherapy; antiallergic; vaccine; histamine release inhibitor; immunogen;
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WG, Van Mechelen MP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%;
                                                                                                                                                               English
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ted surface
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                                                                                                                                                                                                                                                                                                                                          Hewitt E, Lamont A,
len MP, Vinals Y De
                                                                                                                                                                                                                           and ameliorating allergic exposed group of a specific
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                                                                                                                                                                                                                                                                                                                                             BassolsC;
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RESULT 14
AAB20872
ID AAB20
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XX AAB20
XX Inmun
DT 03-JA
XX Inmun
KW Prost
KW Inmun
KW Prost
KW Protc
XX Homo
XX Clair
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                     25-FEB-1999;
25-FEB-1999;
25-FEB-1999;
13-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (IIa) comprising (Ia); and (7) producing (III) by producing (III) (I) can have antiallergic and immunosuppressive activities, and can be used as a vaccine and histamine release inhibitor. (I) (II) and (III) are useful in medicine and in the manufacture of medicaments for treating and preventing allergies. (IV) is useful for identifying mimotopes of P1, in medicine and also in manufacturing medicaments for treating allergies. (I) is useful in diagnostics and in the affinity purification of circulating anti-IgE antibodies from blood. (I) (III) and PC are useful for treating a patient susceptible to or suffering from allergies. (IV) is also useful in diagnosing atopy. AAB25097 to AAB26099 represent peptide sequences which are used in the exemplification of the present
                                                                                                   Immunogens and vaccine comprising the immunogen useful for preventitreating infectious diseases e.g. malaria and chronic disease e.g. cancer, comprises peptide and carrier from protein D of influenzae.
                                                                                                                                                                                                         Coste
                                                                                                                                                                                                                                                                                                                                                   22-FEB-2000;
                                                                                                                                                                                                                                                                                                                                                                                   31-AUG-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protozoacide; Alzheimer's disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           prostate cancer; Haemophilus influenzae; vaccine; infectious disease;
malaria; cytostatic; antiallergic; nootropic; neuroprotective;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           03-JAN-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       [mmunoglobulin E; IgE; immunogenic; immunogen; Protein D; carrier;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (5) a peptide (Ia) (IIa) comprising (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local
                                                                                                                                                                        2000-572040/53.
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                                                                                                                                                                                                                                    SMITHKLINE BEECHAM BIOLOGICALS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EDGQVMDVD
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                                                                                                                                                                                                      Lobet Y,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        peptide mimotope
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                                                                                                                                                                                                                                                                                                                                                   2000WO-EP001457
                                                                                                                                                                                                                                                                                  99GB-00004405.
99GB-00004408.
99GB-00004412.
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                                                                                                                                                                                                      Van-Mechelen MP,
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         nootropic; neuroprotective;
allergy.
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by producing
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
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(Ia) and a carrier (Ib) derived or its fragment. Also described excipient; (2) preparation of ()

describes an immunogen (I) comprising a peptide b) derived from protein D of Haemophilus influenzae described are: (1) a vaccine comprising (I), and a ation of (I), comprising conjugating a peptide to

an

invention

Claim 10;

Page

38;

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English

for preventing

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RESULT 15
ARASIDS
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                                                                     Query Match
Best Local Similarity
Watches 9; Conserva
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                                                                                                                                                                                                                                                                                                The present invention relates to a composition comprising allergy peptides linked by an inert carrier. The allergy peptides are derived from Immunoglobulin E (IGE) or IGE receptor. The present peptide is one such peptide from IGE. The composition is useful as a vaccine or for manufacturing a medicament for the prophylaxis or treatment of allergy. In particular, for boosting an anti-allergy immune response in an individual susceptible to an allergic response
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New vaccine comprising allergy peptides linked by an inert carrier, useful for boosting an anti-allergy immune response in an individual susceptible to an allergic response.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Vaccine; immunoglobulin E; IgE; anti-allergy.
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                                                                                                                                                                                                                                        Sequence 13 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 5; Page 20; 26pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           invention
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9; Conserv
EDGQVMDVD 9
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                                                                                                        Conservative
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                                                                                                                                       Score 47; DB 4; Length 13; Pred. No. 0.02;
                                                                                                           Mismatches
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| Cgn2_6/ptodata/2/pubpaa/US07_NEW_PUB.pep:*
| Cgn2_6/ptodata/2/pubpaa/US08_PUBCOMB.pep:*
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| Cgn2_6/ptodata/2/pubpaa/US09_PUBCOMB.pep:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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sequence 142, App		100	326	324	Sequence 96, Appl	Sequence 10, Appl	Sequence 8, Appli	•	Sequence 136, App	282,	Sequence 12, Appl	•	Sequence 127, App	Sequence 273, App	Sequence 1, Appli	Description

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-09-847-208-5	-10-214-524-2	-10-152-190-1	-10-152-190-1	-152-190-	US-10-152-190-14	US-10-152-190-10	US-10-363-954A-8	US-09-949-375A-8			US-10-176-664-1	US-09-401-636-1	US-10-363-954A-10	375A-1		-954A-	US-10-363-954A-2	US-09-949-375A-6	US-09-949-375A-4	375A-	-439-	-847	-10-152-190-	-10-152-190-	0-362-527-	-362	-362-527-	-10-362-527-	US-10-362-527-328
Sequence 5, Appli	۶. م	е 11.	Œ	12,	14,	e 10,	e 8	8		w	(D 	1,	e H	10	6	4.	ທ N∵	o.	4	N	m	Φ	equence 9	o J	e 327, Āp	e 99, App	e 143, Ap	e 101	Sequence 328, App

ALIGNMENTS

US-10-362-527-1

Sequence 1, Application US/10362527 Publication No. US20040030106A1

GENERAL INFORMATION:

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RESULT 2
US-10-082-014-273
· Sequence 273, Application US/10082014
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NUMBER OF SEQ ID NOS: 328
SOFTWARE: FastSEQ for Windows Version 4.0
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LENGTH: 9
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Best Local (
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CURRENT APPLICATION NUMBER: US/10/362,527
CURRENT FILING DATE: 2003-02-21
PRIOR APPLICATION NUMBER: PCT/EP01/09576
PRIOR FILING DATE: 2001-08-17
PRIOR APPLICATION NUMBER: GB 0020717.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Priede, Martin
APPLICANT: Mason, Sean
APPLICANT: Turnell, William Gordon
APPLICANT: Vinals Y De Bassols, Carlota
TITLE OF INVENTION: Vaccine Immunogens Comprising Disulphide Bridged Cyclised Peptide
TITLE OF INVENTION: and Use Thereof in the Treatment of Allergies
                                                                                                                                                                                                                                                                               TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                 1 EDGQVMDVD 9
                                                                                                                                                                                              Similarity 9; Conserv
                                                                                                                        EDGQVMDVD
                                                                                                                                                                                                Conservative
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                                                                                                                                                                                             Score 47; DB 12;
Pred. No. 1.2e+06;
); Mismatches 0;
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RESULT 3

US-10-372-076-127

; Sequence 127, Application US/10372076

; Sequence 127, Application US/10372076
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Best Local Similarity
Thehes 9; Conserv
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PRIOR FILING DATE: 2001-08-15
NUMBER OF SEQ ID NOS: 290
SOFTWARE: Patentin version 3.1
SEQ ID NO 273
                                                         GENERAL INFORMATION:
APPLICANT: Page, Martin
APPLICANT: Friede, Martin
APPLICANT: Schmidt, Annette Elisabeth
APPLICANT: Stober, Detlef
TITLE OF INVENTION: STABILIZED HBC CHIMER PARTICLES AS THERAPEUTIC VACCINE FOR
TITLE OF INVENTION: CHRONIC HEPATITIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR FILING DATE: 2002-02-22
NUMBER OF SEQ ID NOS: 308
SOFTWARE: PatentIn version 3.2
SEQ ID NO 127
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APPLICANT: Friede, Markin
TITLE OF INVENTION: STABILIZED HBc CHIMER PARTICLES AS THERAPEUTIC VACCINE FOR
TITLE OF INVENTION: CHRONIC HEPATITIS
FILE REFERENCE: 4564/87179
CURRENT APPLICATION NUMBER: US/10/372,076
CURRENT FILLING DATE: 2003-02-21
PRIOR EPILING DATE: 2002-02-21
PRIOR FILING DATE: 2002-02-21
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CURRENT APPLICATION NUMBER: US/10/082,014
CURRENT FILING DATE: 2002-02-22
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TITLE OF INVENTION: IMMUNOGENIC HBC CHIMER PARTICLES STABILIZED WITH AN N-TERMINAL CY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH:
TYPE: PF
CURRENT FILING DATE:
                 CURRENT APPLICATION NUMBER: US/10/677,074
                                         FILE REFERENCE: 4564/87179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: PRT ORGANISM: Homo sapiens
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9; Conserv
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Pred. No. 1.2e+06;
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; TYPE: PRT ; ORGANISM: Homo sapiens US-10-362-527-12
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US-10-677-074-127
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                                                                       GENERAL INFORMATION: Ashley J.
APPLICANY: Birkett, Ashley J.
TITLE OF INVENTION: IMMUNOGENIC HBC CHIMER PARTICLES STABILIZED WITH AN N-TERMINAL CYC
FILE REFERENCE: ICC-130.0 4564/85124
FILE REFERENCE: UCC-130.0 4564/85124
CURRENT APPLICATION NUMBER: US/10/082,014
CURRENT FILING DATE: 2002-02-22
PRIOR APPLICATION NUMBER: 09/930,915
PRIOR APPLICATION NUMBER: 09/930,915
PRIOR FILING DATE: 2001-08-15
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 12
NUMBER OF SEQ ID NOS: 290
SOFTWARE: PatentIn version 3.1
SEQ ID NO 282
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Best Local
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Matches 9; Conserv
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FILE REFERENCE: B45236

CURRENT FALLING INVENDER: US/10/362,527

CURRENT FILING DATE: 2003-02-21

PRIOR APPLICATION NUMBER: PCT/EP01/09576

PRIOR APPLICATION NUMBER: GB 0020717.5

PRIOR APPLICATION NUMBER: GB 0020717.5

PRIOR FILING DATE: 2000-08-22

NUMBER OF SEQ ID NOS: 328

NUMBER OF SEQ ID NOS: 328
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PRIOR FILING DATE: 2002-02-21
PRIOR APPLICATION NUMBER: 10/080,299
PRIOR FILING DATE: 2002-02-21
PRIOR APPLICATION NUMBER: 10/082,014
PRIOR APPLICATION NUMBER: 10/082,014
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NUMBER OF SEQ ID NOS: 308
SOFTWARE: PatentIn version 3.2
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APPLICANT: Turnell, William Gordon
APPLICANT: Vinals Y De Bassols, Carlota
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APPLICANT: Mason, Sean
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100.0%; Pred. No. 1.2e+06;
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                                                                                     CURRENT APPLICATION NUMBER: US/10/677,074
CURRENT FILING DATE: 2003-10-01
PRIOR APPLICATION NUMBER: 10/372,076
PRIOR FILING DATE: 2002-02-21
PRIOR APPLICATION NUMBER: 10/080,299
PRIOR FILING DATE: 2002-02-21
PRIOR PRIOR PILING DATE: 2002-02-21
PRIOR APPLICATION NUMBER: 10/082,014
PRIOR APPLICATION NUMBER: 10/082,014
PRIOR FILING DATE: 2002-02-22
NUMBER OF SEQ ID NOS: 308
COMPANDE: DATE: 2002-03-22
NUMBER OF SEQ ID NOS: 308
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CURRENT FILING DATE: 2003-02-21
PRIOR APPLICATION NUMBER: 10/080,299
PRIOR FILING DATE: 2002-02-21
PRIOR APPLICATION NUMBER: 10/082,014
PRIOR FILING DATE: 2002-02-22
NUMBER OF SEQ ID NOS: 308
SOFTWARE: Patentin version 3.2
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                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 136, Application US/10677074 Publication No. US20040156863A1 GENERAL INFORMATION:
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Matches
                                                   SOFTWARE: PatentIn version 3.2
SEQ ID NO 136
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APPLICANT: Page, Mark
APPLICANT: Friede, Martin
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LENGTH: 10
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Matches 9; Conservative
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APPLICANT: Friede, Martin
APPLICANT: Schmidt, Annette Elisabeth
APPLICANT: Schober, Detlef
TITLE OF INVENTION: STABLIZED HBC CHIMER PARTICLES
TITLE OF INVENTION: CHRONIC HEPATITIS
FILE REFERENCE: 4564/87179
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TYPE: PRT
ORGANISM: Homo sapiens
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Pred. No. 0.024;
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CURRENT APPLICATION NUMBER: US/10/362,527
CURRENT FILING DATE: 2003-02-21
PRIOR APPLICATION NUMBER: PCT/EP01/09576
PRIOR FILING DATE: 2001-08-17
PRIOR APPLICATION NUMBER: GB 0020717.5
PRIOR FILING DATE: 2000-08-22
NUMBER OF SEQ ID NOS: 328
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 8
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                                                          SEQ ID NO 10
LENGTH: 13
TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 10, Application US
Publication No. US200400301
GENERAL INFORMATION:
APPLICANT: Friede, Martin
APPLICANT: Mason, Sean
        Query Match
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Best Local :
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Publication No. US20040030106A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 100.0%;
Best Local Similarity 100.0%;
Matches 9; Conservative 0
                                                                                                                                                             PRIOR APPLICATION NUMBER: GB 0020717.5
PRIOR FILING DATE: 2000-08-22
NUMBER OF SEQ ID NOS: 328
                                                                                                                                                                                                                                                               CURRENT APPLICATION NUMBER: US/10/362,527 CURRENT FILING DATE: 2003-02-21
                                                                                                                                                                                                                                                                                                   APPLICANT: Turneil, William Gordon
APPLICANT: Vinals Y De Bassols, Carlota
TITLE OF INVENTION: Vaccine Immunogens Comprising Disulphide Bridged Cyclised
TITLE OF INVENTION: and Use Thereof in the Treatment of Allergies
FILE REFERENCE: B45236
                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: PCT/EP01/09576
PRIOR FILING DATE: 2001-08-17
                                                                                                                                         SOFTWARE: FastSEQ for Windows Version 4.0
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APPLICANT: Mason, Sean
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nes 9; Conserv
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No. US20040030106A1
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100.0%; Pred. No. 0.032;
    100.0%;
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Pred. No. 0.024;
    Score 47;
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    DB
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    12;
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Length 13;
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US-10-362-527-96
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US-10-362-527-324
, OTHER INFORMATION: Artificial variant of Homo sapiens IgE peptide US-10-362-527-324 \,
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PRIOR FILING DATE: 2000-08-22
NUMBER OF SEQ ID NOS: 328
SOFTWARE FastSEQ for Windows Version 4.0
SEQ ID NO 96
LENGTH: 13
TYPE: PRT
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                                                                                                                               NUMBER OF SEQ ID NOS: 328
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 324
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Publication No. US20040030106A1
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Matches 9; Conser
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APPLICANT: Vinals Y De Bassols, Carlota
TITLE OF INVENTION: Vaccine Immunogens Comprising Disulphide Bridged Cyclised Peptide
TITLE OF INVENTION: and Use Thereof in the Treatment of Allergies
FILE REFERENCE: B45236
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CURRENT FILING DATE: 2003-02-21
PRIOR APPLICATION NUMBER: PCT/EP01/09576
PRIOR FILING DATE: 2001-08-17
                                                                                                                                                                                                CURRENT APPLICATION NUMBER: US/10/362,527
CURRENT FILING DATE: 2003-02-21
PRIOR APPLICATION NUMBER: PCT/EP01/09576
PRIOR FILING DATE: 2001-08-17
PRIOR APPLICATION NUMBER: GB 0020717.5
PRIOR FILING DATE: 2000-08-22
PRIOR FILING DATE: 2000-08-22
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APPLICANT: Vinals Y De Bassols, Carlota
TITLE OF INVENTION: Vaccine Immunogens Compt
TITLE OF INVENTION: and Use Thereof in the
FILE REFERENCE: B45236
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OTHER INFORMATION: Artificial variant of Homo sapiens IgE peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Artificial Sequence
                                                                 TYPE: PRT
ORGANISM: Artificial Sequence
                                              FEATURE:
                                                                                                             LENGTH: 14
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Pred. No. 0.032;
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US-10-362-527-326
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US-10-362-527-100
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; OTHER INFORMATION: US-10-362-527-100
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Best Local
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Best Local :
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                                                                                                                            SEQ ID NO 100
                                                                                                                                                                                                           APPLICANT: Friede, Martin
APPLICANT: Mason, Sean
APPLICANT: Turnell, William Gordon
APPLICANT: Vinals Y De Bassols, Carlota
APPLICANTON: Vaccine Immunogens Comprising Disulphide Bridged Cyclised Peptide
TITLE OF INVENTION: and Use Thereof in the Treatment of Allergies
FILE REFERENCE: 845236
FILE REFERENCE: 2003-02-21
CURRENT APPLICATION NUMBER: DCV-201/9576
PRIOR APPLICATION NUMBER: PCT/ED01/09576
PRIOR APPLICATION NUMBER: GB 0020717.5
PRIOR APPLICATION NUMBER: GB 0020717.5
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CURRENT APPLICATION NUMBER: US/10/362,527
CURRENT FILING DATE: 2003-02-21
PRIOR APPLICATION NUMBER: ECT/EPOL/09576
PRIOR FILING DATE: 2001-08-17
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APPLICANT: Mason,
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PRIOR FILING DATE: 2000-08-22
NUMBER OF SEQ ID NOS: 328
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                                                                                                                                                NUMBER OF SEQ ID NOS: 328
SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                             PRIOR FILING DATE: 2000-08-22
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ORGANISM: Artificial Sequence
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                                        LENGTH: 20
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
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Vinals Y De Bassols, Carlota
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                      Artificial variant of Homo sapiens IgE peptide
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Pred. No. 0.04;
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CURRENT APPLICATION NUMBER: US/10/362,527
CURRENT FILING DATE: 2003-02-21
PRIOR APPLICATION NUMBER: PCT/EP01/09576
PRIOR FILING DATE: 2001-08-17
PRIOR APPLICATION NUMBER: GB 0020717.5
PRIOR FILING DATE: 2000-08-22
NUMBER OF SEQ ID NOS: 328
SOFTWARB: FASTSEQ for Windows Version 4.0
SEQ ID NO 142
LENGTH: 20
ORGANISM: Artificial Sequence
PEATURE:
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Search completed: August 23, 2004, 10:50:19 Job time : 124 secs
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US-10-362-527-142

; Sequence 142, Application US/10362527

; Publication No. US20040030106A1

; GENERAL INFORMATION:
                                                                                                                                                                                                                                                               ; FEATURE:
; OTHER INFORMATION: Artificial variant of Homo sapiens IgE peptide
US-10-362-527-142
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Best Local Similarity
Matches 9; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Friede, Martin
APPLICANT: Mason, Sean
APPLICANT: Mason, Sean
APPLICANT: Turnell, William Gordon
APPLICANT: Vinals Y De Bassols, Carlota
TITLE OF INVENTION: Vaccine Immunogens Comprising Disulphide Bridged Cyclised Peptide
TITLE OF INVENTION: and Use Thereof in the Treatment of Allergies
FILE REFERENCE: B45236
                                                                                      3 EDGQVMDVD 11
                                                                                                                          1 EDGQVMDVD 9
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Maximum Match 100%
Listing first 45 summaries
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47
1 EDGQVMDVD 9
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2: /cgn2_6/ptodata/2/iaa/5B_COMB.pep:*
3: /cgn2_6/ptodata/2/iaa/6A_COMB.pep:*
4: /cgn2_6/ptodata/2/iaa/6B_COMB.pep:*
5: /cgn2_6/ptodata/2/iaa/PCTUS_COMB.pep:*
6: /cgn2_6/ptodata/2/iaa/backfiles1.pep:*
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US-09-543-681A-6594
US-09-328-352-7128
US-09-328-352-6123
US-09-396-651B-2
US-09-396-651B-2
US-09-427-700-12
US-09-427-700-12
US-09-417-540-21
US-08-152-483B-7
US-08-152-483B-7
US-08-152-483B-7
US-08-152-483B-7
US-08-152-483B-9
US-08-152-483B-9
US-08-227-338-1
US-08-152-483B-7
US-08-152-483B-7
US-08-152-483B-7
US-08-724-281-1
US-09-152-3108
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US-08-481-639-7
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US-09-252-991A-22068
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                                                            Sequence 6594, Ap
Sequence 7128, Ap
Sequence 17208, Ap
Sequence 2023, Appli
Sequence 20215, Appli
Sequence 21, Appli
Sequence 21, Appli
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Sequence 3, Appli
Sequence 1, Appli
Sequence 15753, A
Sequence 1, Appli
Sequence 7, Appli
  Sequence
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  9676, Ap
944, Appl
22068, A
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RESULT 2 US-09-328-352-7128 J Sequence 7128, Appli Patent No. 6562958 J Patent No. 6562958 J PATENT INFORMATION: TITLE OF INVENTION: TITLE OF INVENTION: TITLE OF INFORMATION: TITLE OF INFORMATION: CURRENT APPLICATION CURRENT FILING DATE NUMBER OF SEQ ID NO 7128 LENGTH: 462 TYPE: PAT ORGANISM: Acinetob US-09-328-352-7128 Query Match Best Local Similarit Matches 6; Conse	Query Match Best Local Matches Qy 1 Db 139	RESULT 1 US-09-543-681A-6594 US-09-543-681A-6594 Sequence 6594, Appli Patent NO. 6605709 GENERAL INFORMATION: APPLICANT: GARY BRE TITLE OF INVENTION: ITILE OF INVENTION: CURRENT APPLICATION N CURRENT APPLICATION N CURRENT APPLICATION N CURRENT FILING DATE: PRIOR APPLICATION N PRIOR FILING DATE: INUMBER OF SEQ ID NO SEQ ID NO 6594 LENGTH: 1095 TYPE: PRI ORGANISM: Proteus US-09-543-681A-6594		22200000000000000000000000000000000000
Cati Bret NUC BAU (99-([NUC S: 18 S: 18 S: 18	Similarity 7; Conservat EDGQVMDVD 9 EKGQVFDVD 14	Cat TON NU P 1 9.1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		10 66.0 294 11 66.0 303 11 66.0 411 11 66.0 411 11 66.0 411 11 66.0 411 11 66.0 411 11 66.0 520
ion US/0932 ion et al. LEIC ACID MANNII FOR 33PA 13PA 13P2 199-06-04 1252 252 270.2%; Sc 85.7%; Pr	74.5%; 77.8%; ive	ion US/095 ICLEIC ACID ILAGNOSTICS 002-01 MBER: US/0 2000-04-05 ER: US 60/ 9-04-09 8344		母母母母公子母母母母母母母母母
9328352 1. 1. ID AND AMINO ACID FOR DIAGNOSTICS AN /09/328,352 4 /09/328,352 4 /09/328,352 4 /09/328,352 1 / Mismatches	Score 35; DB 4; Length 1095 Pred. No. 1.5e+02; 0; Mismatches 2; Indels	S/09543681A ACID AND AMINO ACID SEQUENCES STICS AND THERAPEUTICS 01 05/09/543,681A 04-05 S 60/128,706 09	ALIGNMENTS	US-09-198-452A-1081 US-09-107-532A-6113 US-09-134-001C-3199 US-09-252-991A-22340 US-08-933-115-2 US-09-205-108-2 US-09-206-115-2 US-09-207-532A-7057 US-09-489-039A-9854 US-09-107-532A-7057 US-09-107-632-2 US-09-107-632-2 US-09-107-632-2 US-09-214-139B-4 US-09-134-001C-3440 US-09-489-039A-11230 US-09-489-039A-11230 US-09-842-164A-6 US-09-621-976-6581
SEQUENCES RELATING TO ACINETOBACTER D THERAPEUTICS Length 462; ; Indels 0; Gaps 0;	1095; .ls 0; Gaps 0;	S RELATING TO PROTEUS MIRABI		Sequence 1081, Ap Sequence 3199, Ap Sequence 23340, A Sequence 2, Appli Sequence 2, Appli Sequence 7057, Ap Sequence 7057, Ap Sequence 9854, Ap Sequence 2, Appli Sequence 2, Appli Sequence 2, Appli Sequence 4, Appli Sequence 4, Appli Sequence 3437, Ap Sequence 3437, Ap Sequence 6437, Ap Sequence 6581, Appli

MIRABILI

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US-09-252-991A-17208
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US-09-328-352-6123
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                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Thes 4; Conserve
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// ORGANISM: Acinetobacter baumannii
US-09-328-352-6123

                                                                                          Sequence 2, Application US/09396651B; Patent No. 6225076
                                                                                                                                     US-09-396-651B-2
                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
APPLICANT: GATY L. Breton et al.
APPLICANT: GATY L. Breton et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO ACINETOBACTER
TITLE OF INVENTION: BAUMANNII FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: GTC99-03PA
CURRENT APPLICATION NUMBER: US/09/328,352
CURRENT FILING DATE: 1999-06-04
NUMBER OF SEQ ID NOS: 8252
SEQ ID NO 6123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
APPLICANT: Marc J. Rubenfield et al.
APPLICANT: MARC J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 107196.136
                                                        GENERAL INFORMATION: APPLICANT: Darst,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 6123, Application US/09328352 Patent No. 6562958
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Best Local Similarity
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                  APPLICANT:
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PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR FILING DATE: 1998-02-18
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR FILING DATE: 1998-07-27
NUMBER OF SEQ ID NOS: 33142
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CURRENT FILING DATE: 1999-02-18
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR FILING DATE: 1998-02-18
  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: PRT
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Darst, Seth A
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Campbell, ELizabeth
Minakin, Leonid
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85.7%;
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Pred. No. 1.4e+02;
1; Mismatches 0
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Pred. No. 3.1e+02;
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RESULT 7
US-09-427-700-12
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                                                                                                                                                                                                                                             Sequence 12, Application US/09427700 Patent No. 6372489 GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
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SEQ ID NO 5032
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 5032, Application US/09621976
SEQ ID NO 12
LENGTH: 273
                                                 APPLICANT: AntiCancer
APPLICANT: Zhao, Ming
APPLICANT: Zhao, Ming
TITLE OF INVENTION: METHOD AND MODEL FOR HAIR PIGMENTATION
FILE REFERENCE: 31276-20017.00
FILE REFERENCE: 31276-20017.00
CURRENT APPLICATION NUMBER: US/09/427,700
CURRENT FILING DATE: 1999-10-27
PRIOR APPLICATION NUMBER: US 60/105,725
PRIOR FILING DATE: 1998-10-27
NUMBER OF SEQ ID NOS: 12
CONTRADER: FESTER OF FOR WINDOW Version 4 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Dumas Milne Edwards, J.B.
APPLICANT: Jobert, S.
APPLICANT: Giordano, J.Y.
APPLICANT: Giordano, J.Y.
TITLE OF INVENTION: ESTs and Encoded Human Proteins.
FILE REFERENCE: GENSET.054PR2
CURRENT APPLICATION NUMBER: US/09/621,976
CURRENT FILING DATE: 2000-07-21
NUMBER OF SEQ ID NOS: 19335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILE REFERENCE: 600-1-258
CURRENT APPLICATION NUMBER: US/09/396,651B
CURRENT FILING DATE: 1999-09-15
NUMBER OF SEQ ID NOS: 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Severinov, Konstantin TITLE OF INVENTION: A CRYSTAL OF BACTERIAL CORE RNA POLYMERASE AND METHODS TITLE OF INVENTION: OF USE THEREOF FILE REFERENCE: 600-1-258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE:
                                    SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: SITE LOCATION: (695)..(696)
OTHER INFORMATION: Any amino acids can be at these two positions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: PRT
ORGANISM: Thermus aquaticus
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: PRT
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6; Conserva
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            68.1%;
66.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 32; DB Pred. No. 55; 1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 33; DB 3; 1
Pred. No. 3.8e+02;
2; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 138;
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RESULT 9
US-08-705-771-21
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US-09-252-991A-22215
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
GENERAL INFORMATION: Rubenfield et al.
APPLICANT: Marc J. Rubenfield et al.
APPLICANT: Marc J. Rubenfield et al.
APPLICANT: MARC J. RUBENFIELD AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 21, Appli
Patent No. 6054289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
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LENGTH: 293
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Patent No. 6551795
                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
APPLICANT: Paul Moore, Reiner Gentz, Hongjin Ji,
APPLICANT: Jian Ni and Jing-Shan Hu
TITLE OF INVENTION: Human Genes, Sequences and
TITLE OF INVENTION: Expression Products
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILE REFERENCE: 107196.136
CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 1999-02-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: US 60/074,788 PRIOR FILING DATE: 1998-02-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM: Pseudomonas aeruginosa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: PRT
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SOFTWARE: WORD PERFECT 5.1
CURRENT APPLICATION DATA:
APPLICATION UMBER: US/08/7
FILING DATE: August 30, 199
CLASSIFICATION: 536
                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 INCH DISKETTE
                                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES: 2: CORRESPONDENCE ADDRESS:
                                                                                                                                                                               STATE: 1
COUNTRY:
                                                                                                                                                                                            ADDRESSEE: CARELLA, BYRNE,
ADDRESSEE: CECCHI, STEWART
STREET: 6 BECKER FARM ROAD
CITY: ROSELAND
STATE: NEW JERSEY
                                                                                     OPERATING SYSTEM: MS-DOS
                                                                                                          COMPUTER: IBM PS/2
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nes 6; Conservative
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 August 30, 1996
N: 536
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66.7%;
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100.0%; Pred. No.
100.0%; Mismatches
                               US/08/705,771
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Pred. No. 1.3e+02;
1; Mismatches 2
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                                                                                                                                                                                                                                                    & OLSTEIN
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1.2e+02;
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US-09-417-540-21
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US-09-417-540-21
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GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Paul Moore, Reiner Gentz, Hongjin Ji,
Jian Ni and Jing-Shan Hu
TITLE OF INVENTION: Human Genes, Sequences and
 Query Match 68.:
Best Local Similarity 66.'
Matches 6; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 21,
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INFORMATION FOR SEQ ID NO: 21:
                                                                                                                                                                                            TELEFAX: 973-994-1744
INFORMATION FOR SEQ ID NO: 21:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE CHARACTERISTICS:
LENGTH: 394 amino acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: MULLINS, J.G. REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEPHONE:
                                                                                                                                                                                                                                                                                                                  FILING DATE: 14-Oct-1999
CLASSIFICATION: -(Unknown)
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/705,771
FILING DATE: August 30, 1996
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: WORD PERFECT 5.1
CURRENT APPLICATION DATA:
                                                                                   TOPOLOGY: linear MOLECULE TYPE: protein SEQUENCE DESCRIPTION: SEQ
                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                               TELECOMMUNICATION INFORMATION: TELEPHONE: 973-994-1700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM: MEDIUM TYPE: 3.5 I
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STATE: NEW JERSEY
COUNTRY: USA
                                                                                                                                        LENGTH: 394 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                  REGISTRATION NUMBER: 33,073 REFERENCE/DOCKET NUMBER: 32
                                                                                                                                                                                                                                                                                                     NAME: MULLINS, J.G.
                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/09/417,540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM PS/2
OPERATING SYSTEM: MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ZIP: 07068
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CECCHI, STEWART & OLSTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EDGQLSDSD 17
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IBM PS/2
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                68.1%;
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Score 32; DB 4; Le
Pred. No. 1.8e+02;
1; Mismatches 2;
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Pred. No. 1.8e+02;
                                                                                    ID NO:
                                                                                                                                                                                                                                                                  325800-346 (PF196)
                                                                                    21:
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                               Length 394;
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 Indels
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Gaps
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EDGQVMDVD

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RESULT 11
US-08-152-483B-3
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US-08-152-483B-3
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Patent No. 5529909
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: No. 5529909ember CLASSIFICATION: 435
PRIOR APPLICATION DATA: APPLICATION NUMBER: 7/857,602
FILING DATE: March 30, 1992
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                      TELEX: 66141 PENNIE INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET: ZZZ
STREET: ZZZZ
CITY: Menlo Park
CTATE: California
                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: January 16, 1991
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 737,899
FILING DATE: July 26, 1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: October 22, 1990 PRIOR APPLICATION DATA: APPLICATION NUMBER: 641,617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 923,693
FILING DATE: July 31, 1992
PRIOR APPLICATION DATA:
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SOFTWARE: Version #1.25
CURRENT APPLICATION DATA:
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APPLICANT: Kumagai,
                                                               ANTI-SENSE: NO ORIGINAL SOURCE: ORGANISM:
                                                                                                                                                                                                                                                                                                                   REFERENCE/DOCKET NUMBER: BIOG-20240/8129-040
TELECOMMUNICATION INFORMATION:
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                                                                                                  HYPOTHETICAL: F
                                                                                                                                   MOLECULE TYPE:
DESCRIPTION:
                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
                                                   IMMEDIATE SOURCE
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                                                                                                                                                            TYPE:
STRANDEDNESS:
TOTY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: FILING DATE: Octobe
                                                                                                                                                                                                                                                                                                                                                        NAME: Halluin, Albert REGISTRATION NUMBER: 2
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2730 Sand Hill Road
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NO
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US-08-152-483B-7
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Best Local
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APPLICATION NUMBER: 923,602
PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION UMBER: 923,692
PRIOR APPLICATION DATA:
APPLICATION UMBER: 600,244
APPLICATION UMBER: 600,244
FILING DATE: October 22, 1990
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 641,617
FILING DATE: January 16, 1991
PRIOR APPLICATION UMBER: 737,899
PRICHAGION NUMBER: 737,899
PRILING DATE: JULY 26, 1991
APPLICATION NUMBER: 737,899
PRILING DATE: JULY 26, 1991
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                                                                                                    TOPOLOGY: cir
MOLECULE TYPE:
DESCRIPTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Ploppy disk
COMPUTER: IBM FOR COMPATER: COMPATER: PC-DOS/MS-DOS
SOFTWARE: Patent in Release #1.0,
SOFTWARE: Version #1.25
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APPLICATION NUMBER: US/08/152,483B
FILING DATE: NO. 5529909ember 12, 1993
CLASSIFICATION: 435
                                                             HYPOTHETICAL: N
                                                                                                                                                                                                                                                                                                                                              REGISTRATION NUMBER: 25,227
REFERENCE/DOCKET NUMBER: BIOG-20240/8129-040
TELECOMMUNICATION INFORMATION:
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                                        ANTI-SENSE: NO ORIGINAL SOURCE:
IMMEDIATE SOURCE
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STREET: 2730 Sand Hill Road
CITY: Menlo Park
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                      ORGANISM:
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US-08-152-483B-9
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Best Local Similarity
"highes 6; Conserva"
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US-08-152-483B-7
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent in Release #1.0,
SOFTWARE: Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/152,483B
FILING DATE: NO. 5529909ember 12, 1993
CLASSIFICATION: 435
CLASSIFICATION: 435
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ZIP: 94025
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
MEDIUM TYPE: IBM PC compatible
TOWNOTIER: IBM PC-DOS/MS-DOS
TOWNOTIER: TOWNOTIER
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APPLICATION NUMBER: 7/857,602
FILING DATE: March 30, 1992
PRIOR APPLICATION DATA:
APPLICATION UMBER: 923,692
FILING DATE: July 31, 1992
PRIOR APPLICATION DATA:
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APPLICANT: Della-Cioppa, Guy
APPLICANT: Kunagai, Monto
TITLE OF INVENTION: TYROSINASE-ACTIVATOR
TITLE OF INVENTION: PROTEIN FUSION ENZYME
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FILING DATE: October 22, 1990
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 641,617
FILING DATE: January 16, 1991
PRIOR APPLICATION NUMBER: 737,899
FILING DATE: JULY 26, 1991
ATTORNEY/AGENT INFORMATION:
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TELEX: 66141 PENNIE
INFORMATION FOR SEQ ID NO: 9:
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HYPOTHETICAL: NAME OF THE PROPERTY OF THE PROP
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REGISTRATION NUMBER: 25,227
REFERENCE/DOCKET NUMBER: BIOG-20240/8129-040
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 854-3660
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ADDRESSEE: Pennie & Edmonds
STREET: 2730 Sand Hill Road
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                                                                                                                                                             DESCRIPTION:
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CITY: Menlo Park
STATE: California
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/004
FILING DATE: 02-OCT-1995
ATTORNEY/AGENT INFORMATION:
NAME: Teskin, Robin L.
REGISTRATION NUMBER: 35,030
REFERENCE/DOCKET NUMBER: 0100
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: JENSON, A. Benn
APPLICANT: GHIM, Shin-Je
TITLE OF INVENTION: PAPILI
NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                   TOPOLOGY: 1i
                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
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MEDIUM TYPE: Floppy disk
COMPUTER: IEM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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IMMEDIATE SOURCE:
CLONE:
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                                                                                                                                                               LENGTH: 508 amino acids
TYPE: amino acid
STRANDEDNESS: single
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TELEPHONE: (703) 836-2021
TT TT NO:
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CITY: Alexandria
STATE: Virginia
                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 01-OCT-1996
CLASSIFICATION: 424
                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY:
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200 EDGDMMDI 207
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                           1 EDGQVMDV 8
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: United States
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                                                           Conservative
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                                                                                                                                                    linear
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62.5%;
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                                                      Score 32; DB 2;
Pred. No. 2.4e+02;
2; Mismatches 1
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; Sequence 1, Application US/09134377
; Patent No. 6485728

RESULT 15 US-09-134-377-1

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GENERAL IMPORMATION:
APPLICANT: SCHLEGGI, C. Richard
APPLICANT: JENSON, A. Bennett
APPLICANTON PAPILICANOVERS:

MUMBER OF SEQUENCES:

CARESPONDENCE ADDRESS:
ADDRESSEE: BIRNS, DOANE, SWECKER & MATHIS
STREET: P. D. Box 1404
CITY: Alexandria
COUNTRY: United States
COMPUTER: IRB PELCATION DATA:
APPLICATION MUMBER: US/09/134,377
EPILING DATE:
CLASSIFICATION
APPLICATION MUMBER: US/09/134,377
EPILING DATE:
APPLICATION MUMBER: US/09/134,377

EPILING DATE:
APPLICATION MUMBER: US/09/134,281

PELING DATE:
APPLICATION MUMBER: US/09/134,281

PELING DATE:
APPLICATION MUMBER: US/09/134,281

APPLICATION MUMBER: US/09/134,377

EPILING DATE:
APPLICATION MUMBER: US/09/134,281

PELING DATE:
APPLICATION MUMBER: US/09/134,377

EPILING DATE:
APPLICATION MUMBER:
APPLICATION MUMBER:
US/09/134,377

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US/09/134,377

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Minimum DB seq length: 0
Maximum DB seq length: 9
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Perfect score:
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Pred. No.
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                            4321
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1: pir1:*
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47
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Maximum Match 100%
Listing first 45 summaries
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and is No. is the number of results predicted by chance to have a greater than or equal to the score of the result being printed, serived by analysis of the total score distribution.

SUMMARIES

45	44	43	42	41	40	39	38	37	36	35	34	(LI	32) L	30
12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
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A25836	PT0725	PT0724	PT0547	PT0613	PT0298	XGHUEU	G60588	E60588	PT0688	PT0689	PT0567	PT0665	PT0523	PT0611	B39127
L-serine ammonia-1		l receptor	receptor	T-cell receptor be	Ig heavy chain CRD	n		-activatino	receptor	l receptor	_	l receptor	receptor		phosphotransferase

ALIGNMENTS

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T-cell receptor beta chain V-D-J region (121-1K) - mouse (fragment)
C:Species: Mus musculus (house mouse)
C:Date: 17-Jul-1992 #sequence_revision 17-Jul-1992 #text_change 30-May-1997
C:Accession: PT0657
R;Feeney, A.J.
J. Exp. Med. 174, 115-124, 1991
A;Title: Junctional sequences of fetal T cell receptor beta chains have few N regions.
A;Reference number: PT0509; MUID:91277601; PMID:1711558
A;Accession: PT0657
A;Status: translation not shown
A;Residues: 1-6 <FEES
A;Experimental source: day 4 postnatal thymus, strain BALB/c
C;Keywords: T-cell receptor
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J. Exp. Med. 174, 115-124, 1991
J. Exp. Med. 174, 115-124, 1991
A;Title: Junctional sequences of fetal T cell receptor beta chains have few N regions.
A;Reference number: PT0509; MUID:91277601; PMID:1711558
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A;Status: translation not shown
A;Molecule type: mRNA
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C;Species: Mus musculus (house mouse)
C;Date: 17-Jul-1992 #sequence_revision 17-Jul-1992 #text_change 30-May-1997
C;Accession: PT0604
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ative 0; Mismatches
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J. 2.8e+05;
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A; Accession:
A; Status: pr
A; Molecule t
A; Residues:
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A; Residues: 1-7 <FEE>
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A;Title: Junctional sequences of
A;Reference number: PT0509; MUID:
A;Accession: PT0543
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T-cell receptor beta chain V-D-J region (126-1BE) - mouse (fragment)
C;Species: Mus musculus (house mouse)
C;Date: 17-Jul-1992 #sequence_revision 17-Jul-1992 #text_change 30-May-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Reference number: A28719; MUID:88326920; PMID:3261994
A;Accession: A28719
A;Molecular companies to the property of the prope
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R;Burstein, Y.; Buchner, V.; Pecht, M.;
Biochemistry 27, 4066-4071, 1988
A;Title: Thymic humoral factor gamma-2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         thymic humoral factor gamma-2 - bovine (fragment) C;Species: Bos primigenius taurus (cattle) C;Date: 30-Sep-1989 #sequence_revision 30-Sep-198
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N;Alternate names: T-cell hybridoma D6-18 protein
C;Species: Homo sapiens (man)
C;Date: 31-Jan-1992 #sequence_revision 31-Jan-1992 #text_change 23-Feb-1997
C;Accession: A37027
C;Accession: A37027
C;Yoshizuka, N.; Yoshimura, M.; Tsuchiya, S.; Okamoto, K.; Kobayashi, Y.; Os
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A; Residues: 1-8 < BUR>
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A;Title: Macrophage chemotactic factor (MCF) produced by a human T cell hybridoma clone. A;Reference number: A37027; MUID:89376581; PMID:2505934
B
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Matches
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                                                                                                                                                                                                                                            type: protein
: 1-9 <YOS>
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2.8e+05;
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                                                                                                                 2.8e+05;
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macrophage cytotoxicity-inducing factor, 29K - human (fra C;Species: Homo sapiens (man)
C;Species: Homo sapiens (man)
C;Date: 12-Feb-1993 #sequence_revision 12-Feb-1993 #text_
C;Accession: A60427
R;Jones, C.M.; Prince, C.A.; Williams, J.S.
Exp. Hematol. 19, 704-709, 1991
A;Title: Purification and amino acid analysis of a human A;Reference number: A60427; MUID:91372335; PMID:1909970
A;Accession: A60427
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PT0271
                                                                                                                                                                         polyphosphate-glucose phosphotransferase (EC 2.7.1.63) - Propionibacterium freudenreichii C,Species: Propionibacterium freudenreichii subsp. shermanii C;Date: 19-Mar-1997 #sequence_revision 19-Mar-1997 #text_change 03-Jun-2002 C;Accession: S29735 R;Phillips, N.F.B.; Horn, P.J.; Wood, H.G. Arch. Biochem. Biophys. 300, 309-319, 1993 A;Title: The polyphosphate- and ATP-dependent glucokinase from Propionibacterium shermani A;Reference number: S29735; MUID:93143332; PMID:8380966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Molecule type: DNA
A;Residues: 1-4 </AM>
A;Experimental source: B lymphocyte
C;Keywords: heterotetramer; immunogi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R;Yamada, M.; Wasserman, R.; Reichard, B.A.; Shane, S.; Caton, A.J.; Rovera, G. J. Exp. Med. 173, 395-407, 1991
A;Title: Preferential utilization of specific immunoglobulin heavy chain diversity and A;Reference number: PT0222; MUID:91108337; PMID:1899102
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C;Date: 30-Sep-1993 #sequence_revision
C;Accession: PT0271
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S29735
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                                                                                                  A;Status: preliminary
A;Molecule type: protein
A;Residues: 1-7 <PHI>
                                                                             C; Keywords: phosphotransferase
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Pred. No. 2.8e+05;
1; Mismatches 1
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R;Duve, H.; Johnsen, A.H.; Sewell, J.C.; Scott, A.G.; Orchard, I.; Rehfeld, J.F.; Thorpe Proc. Natl. Acad. Sci. U.S.A. 89, 2326-2330, 1992
A;Title: ISolation, Structure, and activity of phe-Met-Arg-Phe-NH-2 neuropeptides (desi A;Reference number: A41978; MUID:92196111; PMID:1549595
A;Accession: D44787
                                                   A;Molecule type: protein
A;Residues: 1-9 <DUV>
C;Keywords: amidated carboxyl end; neuropeptide
F;9/Modified site: amidated carboxyl end (Phe) #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C;Species: Streptococcus sobrinus
C;Date: 20-Mar-1992 #sequence_revision 20-Mar-1992 #text_change 23-Jun-1993
C;Accession: B39841
R;Mooser, G; Hefta, S.A.; Paxton, R.J.; Shively, J.E.; Lee, T.D.
J. Biol. Chem. 266, 8916-8922, 1991
A;Title: Isolation and sequence of an active-site peptide containing a catalytic asparti A;Accession: B39841
A;Accession: B39841
A;Status: preliminary
A;Status: preliminary
                                                                                                                                                                                                                                                           calliFMRFamide 13 - bluebottle fly (Calliphora vomitoria)
C;Species: Calliphora vomitoria
C;Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 17-Mar-1999
C;Accession: D44787
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A; Residues: 1-9 < MOO>
C; Keywords: glycosyltransferase;
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A;Title: Junctional sequences of fetal T cell receptor beta chains have few A;Reference number: PT0509; MUID:91277601; PMID:1711558
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A; Residues: 1-8 < FEE>
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A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-6 <CHE>
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A; Residues: 1-4 <SLE>
A; Cross-references: GB: M81463
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A;Title: Escherichia coli K-12 and B contain functional bacteriophage P2 ogr genes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C;Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 30-Sep-1993 C;Accession: A41990
C;Accession: A4, Gebhardt, K.; Kristiansen, E.; Birkeland, N.K.; Lindqvist, B J. Bacteriol. 174, 4094-4100, 1992
                                                                                    A;Reference number: A35640;
A;Accession: B35640
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C, Species: Escherichia coli
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A; Residues: 1-9
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Biochemistry 33, 15131-15140, 1994
A;Title: Purification and biochemical characterization of recombinant N-methylpurine-DNA
A;Reference number: A56029; MUID:95092772; PMID:7999773
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C;Species: Mus musculus (house mouse)
C;Date: 19-Jan-1996 #sequence_revision 19-Jan-1996 #text_change 19-Jan-1996
C;Accession: A56029
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IGAO DACDE
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AL17 CARMA
CCKN MACEU
WP1 PERAT
AL11 CARMA
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PPH1—LYCES
BIOA—CITER
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RESULT 2
PLP BRANA STANDARD; PRT; 8 AA.

ID PLP BRANA STANDARD; PRT; 8 AA.

AC P81707;
DT 15-JUL-1999 (Rel. 38, Created)
DT 35-JUL-1999 (Rel. 38, Last sequence update)
DT 30-MAY-2000 (Rel. 39, Last amnotation update)
DE Plastidial lipid-associated protein (Fragment).
OS Brassica napus (Rape).
OC Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tra

a; Tracheophyta; eudicots; rosids;

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л	9	34. Similarity 100 3; Conservative	PS00406; ACT PS00432; ACT PS01132; ACT PS01132; ACT 1 protein. 1 8 8 AA; 976	SUBCELIAULAR LOCATION: Cytoplasmi MISCELLANEOUS: ON THE 2D-GEL THE 6.8, ITS MW IS: 46 kDa. SIMILARITY: Belongs to the actin MIPTO; IPROM4001; Actin.	0 70 12 0	O	Carcinus maenas (Common sh Carcinus maenas (Common sh Eukaryota; Metazoa; Arthro Eumalacostraca; Eucarida; Eubrachyura; Portunoidea; NCBI_TaxID=6759;	(Rel. 34, (Rel. 34, (Rel. 38,	STANDARD;		21.3 21.3 21.3 21.3 21.3 21.3 21.3 21.3
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MEDLINE=99349136; PubMed=10420651;
Hernandez-Pinzon I., Ross J.H.E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TISSUE=Stomach; PubMed=1747388; MEDLINE=92082847; PubMed=1747388; Favrel P., Kegel G., Sedlmeier D., Keller R., van Wormhoudt A.; "Structure and biological activity of crustacean gastrointestinal "Structure and biological activity of gastrin/cholecystokinin."; peptides identified with antibodies to gastrin/cholecystokinin.";
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Eumalacostraca; Eucarida; Decapoda; Pleocyemata; Astacid
Nephropoidea; Nephropidae; Nephrops.
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01-MAR-1992 (Rel. 21, Last sequence upda
01-MAR-1992 (Rel. 21, Last annotation up
Gastrin/cholecystokinin-like peptide D1.
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Planta 208:588-598(1999).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                     Biochimie 73:1233-1239(1991).
-!- FUNCTION: May control digestion processes in crustaceans.
-!- SIMILARITY: Belongs to the gastrin/cholecystokinin family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE.
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Calliphora vomitoria (Blue blowfly).
Bukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha; Oestroidea;
                                                              CalliFMRFamide 13.
                                                                                                                                                     FARD_CALVO
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(Rel. 32, Last annotation
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Pred. No. 1.4e+05;
2; Mismatches 0
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Pred. No.
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RESULT 5
GLUR_HUMAN
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Best Local :
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P02729;
21-JUL-1986 (Rel.
21-JUL-1986 (Rel.
16-OCT-2001 (Rel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Isolation, structure, and activity of -Phe-Met-A neuropeptides (designated callipmrFamides) from to Calliphora vomitoria.";
Proc. Natl. Acad. Sci. U.S.A. 89:2326-2330(1992)...
-!- SIMILARITY: Belongs to the FARP (FMRFamide reference...)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TISSUE=Thoracic ganglion;
MEDLINE=92196111; PubMed=1549595;
Duve H., Johnsen A.H., Sewell J.C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Calliphoridae; Calliphora.
NCBI_TaxID=27454;
FAR6 MACRS
P83279;
28-FEB-2003
28-FEB-2003
28-FEB-2003
                                                                                                                                                                                                                                                                                                      Lote C.J., Weiss J.B.;

"Identification in urine of a low-molecular-weight highly polar glycopeptide containing cysteinyl-galactose.";

Biochem, J. 123:259-259 (1971).

I rUNCTION: The identity of the glycoprotein from which this peptide is derived is unknown. No physiological function has been attributed. An erythrocyte membrane glycopeptide having a similar structure has also been found.

PIR; A03188; XGHHEU.
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PIR; D44787; D44787.
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Rehfeld J.F., Thorpe A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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MOD_RES
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100.0%; Pre
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Last annotation update)
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22D10699C87AB6D8 CRC64;
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Pred. No. 1.4e+05;
1; Mismatches C
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Pred. No.
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RESULT 7
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Matches 2
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NON TER
SEQUENCE
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16-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                               Gomez R., Losada M., Serrano A.;
Submitted (JUN-2001) to Swiss-Prot.
-!- CATALYTIC ACTIVITY: Diphosphate + H(2)O = 2
-!- SUBCELLULAR LOCATION: Cytoplasmic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rhodopseudomonas viridis.
Bacteria; Proteobacteria; Alphaproteobacteria;
Hyphomicrobiaceae; Blastochloris.
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16-OCT-2001 (Rel. 40, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Inorganic pyrophosphatase (EC 3.6.1.1) (Pyrophosphate phosphohydrolase) (PPase) (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Three more novel FMRFamide-like neuropeptide sequences from the eyestalk of the giant freshwater prawn Macrobrachium rosenbergii Peptides 22:191-197(2001).

-I- MASS SPECTROMETRY: MW-1080.7; METHOD=MALDI.

-I- SIMILARITY: Belongs to the FARP (FMRFamide related peptide)
                                                                                                                                                                                                                                                                                                            InterPro; IPR00816
PROSITE; PS00387;
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MEDLINE=21107394; PubMed=11179812;
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MOD_RES
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Macrobrachium rosenbergii (Giant fresh water prawn).
Eukaryota; Metazoa; Arthropoda; Crustacea; Malacostraca;
Eumalacostraca; Eucarida; Decapoda; Plecoyemata; Caridea;
Palaemonoidea; Palaemonidae; Macrobrachium.
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                                                                                                                                                                                                                                                                                                                                                                                                                MW OF THIS
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Best Local S
Matches 1
                                                                                           Merrick B.A., Patterson R.M., Wichter L.L., He C., Selki "Separation and sequencing of familiar and novel murine using preparative two-dimensional gel electrophoresis.";
                                                                                                                                                                                                                                                                    Mus musculus (Mouse).
Eukaryota; Metazoa; (
Mammalia; Eutheria; I
    SEQUENCE
                            NON
                                     Electrophoresis 15:735-745(1994).
-!- MISCELLANEOUS: On the 2D-gel the determined protein is: 6.0, its MW is: 32 kDa.
                                                                                                                                                                                                                                                                                                                               01-OCT-1994 (Rel. 30, Created)
01-OCT-1994 (Rel. 30, Last seq
15-MAR-2004 (Rel. 43, Last annu
Unknown protein from 2D-page o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOUSE
                                                                                                                                                                    MEDLINE=95009907; PubMed=7523108;
                                                                                                                                                                                                                                                                                                                                                                                                     P38640;
01-OCT-1994
                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                     NCBI_TaxID=10090;
                                                                                                                                                                                       TISSUE=Fibroblast;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Amphibian defense peptide; Amidation MOD_RES 9 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TISSUE=Skin secretion;
Wabnitz P.A., Bowie J.H., Tyler
"Peptides from the skin glands
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "The structure of new peptides from the Australin red 'Litoria rubella'. The skin peptide profile as a probe of evolutionary trends of amphibians."; Aust. J. Chem. 49:955-963(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TISSUE=Skin secretion;
Steinborner S.T., Wabnitz P.A., Waugh R.J.,
Tyler M.J., Wallace J.C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Aust.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rubella.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Amphibia; Batrachia; Chordata; Craniata; Vertebrata; Euteleostomi; Pelodryadinae; Litoria. Neobatrachia; Hyloidea; Hylidae; NCHT Teyrn-1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28-FEB-2003 (Rel. 41, Created)
28-FEB-2003 (Rel. 41, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation updat
Rubellidin 4.2/4.3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -!- FUNCTION: Shows neither neuropeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Litori electrica. Comparison with the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TISSUE=Skin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=104895;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Litoria rubella (Desert tree frog)
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P82075; P82093;
                          protein is: 6.0, TER 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MASS SPECTROMETRY: MW=883; METHOD=FAB
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SUBCELLULAR LOCATION: Secreted
                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOUSE
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                                                                                                                                                                                                                                                                                                                                                                                                                                             STANDARD;
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  1102
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                                                                                                                                                                                                                                                                      Chordata;
Rodentia;
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                                                                                                                                                                                                                                                                                                                                 Last sequence update)
Last annotation update)
2D-page of fibroblasts (
  MW;
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7E73EAB6D05B1AAB
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Pred. No. 1.4e
3; Mismatches
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                                                                                                                                                                                                                                                                    Sciurognathi;
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Australian buzzing
skin peptides from
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CRC64
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Rubellidin
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                                                           pI of this unknown
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                                                                                                                                            Selkirk
                                                                                                                                                                                                                                                                    Murinae; Mus
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din 4.3
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                                                                                                                                            J.K.;
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RESULT
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P25154;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-MAY-1992 (Rel. 22, Created)
01-MAY-1992 (Rel. 22, Last sequence update)
01-MAR-2004 (Rel. 43, Last annotation update)
15-MAR-2004 (Rel. 43, Last annotation update)
Acylamino-acid-releasing enzyme (EC 3.4.19.1) (AARE) (hydrolase) (APH) (Acylaminoacyl-peptidase) (Fragment).
                                        28-FEB-2003 (Rel. 41, Created)
28-FEB-2003 (Rel. 41, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
28-FEB-2003 (Rel. 41, Last annotation update)
Bromoheptapeptide Im.
Conus imperialis (Imperial cone).
Conus imperialis (Imperial cone).
Eukaryota; Metazoa; Mollusca; Gastropoda; Orthogastropoda;
Apogastropoda; Caenogastropoda; Sorbeoconcha; Hypsogastropoda;
Apogastropoda; Conoidea; Conidae; Conus.
                                                                                                                                                          BRHP CONIM
P58803;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bukaryota; Metazoa; CHOLLAGIA; Camanalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Oryctolagus
                                                                                                                                                                                      CONIM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Anal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDIINE-9222120; PubMed=1807161;
Krishna R.G., Chin C.C.Q., Wold F.;
"N-terminal sequence analysis of N alpha-acetylated proteins after
unblocking with N-acylaminoacyl-peptide hydrolase.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=9986;
                                                                                                                                                                                                                                                                                                                                                                      NON
                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; iPR002471; Pept S9 AS.
PROSITE; PS00708; PRO_ENDOPEP_SER; PARTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TISSUE=Muscle;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                           MEROPS; S09.004;
     SEQUENCE, SYNTHESIS,
                                                                                                                                                                                                                                                                                                                                                                                                Hydrolase;
                                NCBI_TaxID=35631;
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nes 1; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1. Biochem. 199:45-50(1991). Etc. The hydrolysis of the N-termine PUNCTION: This enzyme catalyzes the hydrolysis of the N-termine peptide bond of an N-acetylated peptide to generate an N-acetylated amino acid and a peptide with a free N-terminus. It preferentially cleaves off Ac-Ala, Ac-Met and Ac-Ser.

CATALYTIC ACTIVITY: Acylaminoacyl-peptide + H(2)0 = acylamino acid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SUBCELLULAR LOCATION: Cytoplasmic. SIMILARITY: Belongs to peptidase family
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                                                                                                                                                                                                                                                                                                                Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                Acetylation.
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                                                                                                                                                                          STANDARD;
                                                                                                                                                                                                                                                                                                                                                         775 MW;
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Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      25.5%;
16.7%;
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     AND MASS SPECTROMETRY
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1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                     ACETYLATION
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                                                                                                                                                                            PRT;
                                                             Sorbeoconcha; Hypsogastropoda;
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                                                                                                                                                                                                                                                                                                                  1.4e+05;
                                                                                                                                                                            7
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RESULT 12
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MOD_RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TISSUE=Venom;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -!- TISSUE SPECIFICITY: Expressed by the venom -!- MASS SPECTROMETRY: MW=853.19; METHOD=LSIMS
01-JAN-1988 (Rel. 06, Created)
01-JAN-1988 (Rel. 06, Last sequence up
01-OCT-1994 (Rel. 30, Last annotation
Galactose oxidase inhibitor.
Dactylium dendroides (Cladobotryum der
                                                                                                                                                                                                                  MEDLINE=92195954; PubMed=1686933;
Evans B.D., Pohl J., Kartsonis M.A., Calabrese R.L.
"Identification of RFamide neuropeptides in the med
Peptides 12:897-908(1991).
                                                                                                                                                                                                                                                                                 Hirudo medicinalis (Medicinal leech).
Eukaryota; Metazoa; Annelida; Clitellata; Hirudinida; Hirudinea;
Arhynchobdellida; Hirudiniformes; Hirudinidae; Hirudo.
                                                                                                                                                                                                                                                                                                            01-NOV-1995 (Rel. 32, Created)
01-NOV-1995 (Rel. 32, Last sequence update)
01-NOV-1995 (Rel. 32, Last annotation update)
PMRFamide-like neuropeptide GGKYMRF-amide.
                                                                                                                                                                                                                                                                                                                                        P42564;
01-NOV-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bromination;
                                                                                                                                                                                 Neuropeptide; Amidation.
MOD_RES 7 7
                                                                                                                                                                                                                                                                                                                                                          FAR5_HIRME
                                    P06294;
01-JAN-1988
                                                                DACDE
                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                         SEQUENCE
                                                       IGAO DACDE
                                                                                                                                                                                                             SIMILARITY: Belongs to
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                                                                                                                                                                                                                                                                           TaxID=6421;
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   (Cladobotryum dendroides)
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                                                                                                                                                                                                             the FARP
                                                                                                                                                                          69D4068B53387810 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 11;
Pred. No.
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AMIDATION.
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                              update)
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RESULT 14

UH11 RAT

ID UH11 RAT

ID UH11 RAT

ID UH11 RAT

AC P56576;

DT 15-DEC-1998 (Rel. 37, Created)

DT 15-DEC-1998 (Rel. 37, Last amnotation update)

DT 15-DEC-1998 (Rel. 37, Last amnotation update)

DT 15-MAR-2004 (Rel. 43, Last amnotation update)

DT 15-MAR-2004 (Rel. 37, Last amnotation update)

DE Unknown protein from 2D-page of heart tissue (Spons Rattus norvegicus (Rat).

OC Rattus norvegicus (Rat).

OC Hukaryota; Metazoa; Choridata; Craniata; Vertebrate (Rat).

OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muric (Rat)

OX NCBL_TAXID=10116;

RN (1)

RP SEQUENCE.

STRAIN=Wistar; TISSUE=Heart;

RA Li X.-P., Pleissner K.-P., Scheler C., Regitz-Zac Jungblut P.R.;

RA Li X.-P., Pleissner K.-P., Scheler C., Regitz-Zac Jungblut P.R.;

RA Li X.-P., Pleissner K.-P., Scheler C., Regitz-Zac Jungblut P.R.;

RA Li X.-P., Pleissner K.-P., Scheler C., Regitz-Zac Jungblut P.R.;

RA Li X.-P., Pleissner K.-P., Scheler C., Regitz-Zac Jungblut P.R.;

RA Li X.-P., Pleissner K.-P., Scheler C., Regitz-Zac Jungblut P.R.;

RA Li X.-P., Pleissner K.-P., Scheler C., Regitz-Zac Jungblut P.R.;

RA Li X.-P., Pleissner K.-P., Scheler C., Regitz-Zac Jungblut P.R.;

RA Li X.-P., Pleissner K.-P., Scheler C., Regitz-Zac Jungblut P.R.;

RA Li X.-P., Pleissner K.-P., Scheler C., Regitz-Zac Jungblut P.R.;

RA Li X.-P., Pleissner K.-P., Scheler C., Regitz-Zac Jungblut P.R.;

RA Li X.-P., Pleissner K.-P., Scheler C., Regitz-Zac Jungblut P.R.;

RA Li X.-P., Pleissner K.-P., Scheler C., Regitz-Zac Jungblut P.R.;

RA Li X.-P., Pleissner K.-P., Scheler C., Regitz-Zac Jungblut P.R.;

RA Li X.-P., Pleissner K.-P., Scheler C., Regitz-Zac Jungblut P.R.;

RA Li X.-P., Pleissner K.-P., Scheler C., Regitz-Zac Jungblut P.R.;

RA Li X.-P., Pleissner K.-P., Scheler C., Regitz-Zac Jungblut P.R.;

RA Li X.-P., Pleissner K.-P., Scheler C., Regitz-Zac Jungblut P.R.;

RA Li X.-P., Pleissner K.-P., Scheler C., Regitz-Zac Jungblut P.R.;

RA Li X.-P., Pleissner K.-P., Scheler C., Regitz-Zac Jungblut P.R.;

RA Li X.-P., Pleissner K.-P., Scheler C., Regitz-Zac
RESULT 15
AL17 CARMA
ID AL17 C
AC P81820
DT 30-MAY
DT 30-MAY
DT 30-MAY
DT Carcin
OC Eukary
OC Eumala
OC Eubrac
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                                                                                                      Eukaryota; Metazoa; Arthropoda; Crustacea; Malacostraca; Eumalacostraca; Eucarida; Decapoda; Pleocyemata; Brachyura; Eubrachyura; Portunoidea; Portunidae; Carcinus.
     SEQUENCE
                                             NCBI_TaxID=6759;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN=Wistar; TISSUE=Heart; Li X.-P., Pleissner K.-P., Scheler C., Regitz-Zagrosek V.,
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PIR; A01341, XEYDGD.

Copper; Metalloenzyme inhibitor.

SEQUENCE 7 AA; 706 MW; 75BB01A456D87DB0 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Identification of a peptide inhibitor of galactose oxidase Dactylium dendroides.";
Fed. Proc. 31:447-447(1972).
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MW is: 42 kDa.
OR A.
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Pred. No. 1.4e+05
0; Mismatches
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Pred. No.
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                                                               Query Match
Best Local Similarity
                                                                                                               -!- FUNCTION: May act as a neurotransmitter or neuromodulator.
-!- SIMILARITY: Belongs to the allatostatin family.
Neuropeptide; Amidation; Multigene family.
MOD_RES 8 8 AMIDATION (POTENTIAL).
                                                                                                                                                                    "Isolation and identification of multiple neuropeptides of th allatostatin superfamily in the shore crab Carcinus maenas."; Eur. J. Blochem. 250:727-734(1997).
                                                                                                                                                                                                                    TISSUE=Cerebral ganglion, and Thoracic ganglion;
MEDLINE=98121193; PubMed=9461295;
Duve H., Johnsen A.H., Maestro J.-L., Scott A.G., Jaros P.P.,
                                                                                                        SEQUENCE
                                                                                                                                                                                                                Thorpe A.;
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                                                               23.4%;
100.0%;
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                                                             Score 11;
Pred. No.
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Job time: 23 secs

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Maximum Match 100%
Listing first 45 summaries
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sp_organelle:*
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sp_bacteria:*
sp_fungi:*
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sp_unclassified:*
sp_rvirus:*
sp_bacteriap:*
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sp_rodent:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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Q51594 escherichia	088953 vaccinia vi	Q42507 triticum ae		Q86s10 homo sapien	P83530 lactobacill	P72149 pseudomonas	Q50832 methanococc		Q90493 eopsaltria	Q9qvi5 rattus sp.	Q9p285 homo sapien	Korejo momo emprem	ORinis homo sanien	newcastle	O8lpt5 zea mays (m	Q96p97 homo sapien	Description		

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mesc		Q9et18 mus spretus	mand			Q9zez9 buchnera ap	Q9r3x0 planktothri		08ij16 danio albol	notrop			Q9qza8 mus musculu			Q9r735 streptomyce	Q937j8 escherichia	Q93le4 heliobacill	Q40659 oryza sativ			ω	50 ћото вар	8	t7	Q51765 pseudomonas	Q94695 physarum po	Q9ubl3 albinaria h

ALIGNMENTS

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RESULT 1
Q36PD
ID P97
ID P96P
AC Q96P
DT 01-D
DT 01-D
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C Euka
OC Euka
OC Euka
OC Mamm
OC MCBI
RN [1]
RP SEQU
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Q8LPT5
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Matches 3
Q8LPT5 PRELIMINARY; PRT; 9 AA.
Q8LPT5;
01-OCT-2002 (TrEMBLrel. 22, Created)
01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
01-OCT-2002 (TrEMBLrel. 22, Last annotation update)
Beta-expansin-like protein (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                               03-PEC-2001 (TrEMBLrel. 19, 0
01-DEC-2001 (TrEMBLrel. 19, 1
01-DEC-2001 (TrEMBLrel. 19, 1
01-DEC-2001 (TrEMBLrel. 19, 1
Reptin52 protein (Fragment).
                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.

Kang H.S., Park Y.J., Jung H.M., Jun D.Y., Huh T.L., Kim Y.H.;

"Characterization of TPA-responsive genes in U937 cells using differential display PCR.";

Submitted (JTL-2001) to the EMBL/GenBank/DDBJ databases.

EMBL; AF401216; AAL02172.1; -.

NON TER

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Mammalia; Eutheria;
                                                                                                                                                                                                                                                                     SEQUENCE
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Primates;
                                                                                                                                                                                                                       40.4%;
                                                                                                                                                                                                                                                                5CDDAAA681AB1873 CRC64;
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                                                                                                                                                                                                         Score 19; DB 4;
Pred. No. le+06;
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                          Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
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Best Local
                                                                                                                                                                                                                                 Q8IUJ5
Q8IUJ5;
Q08IUU5;
Q1-MAR-2003 (TrEMBLrel. 23, Created)
Q1-JUN-2003 (TrEMBLrel. 24, Last sequence update)
Q1-OCT-2003 (TrEMBLrel. 25, Last annotation update)
Q1-CT-2003 (Tremblance)
Q1-CT-2003 
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=4577;
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MEDLINE=94175786; PubMed=8129624;

MIDLINE=94175786; PubMed=8129624;

Collins M.S., Strong I., Alexander D.J.;

"Evaluation of the molecular basis of pathogenicity

"Evaluation of the molecular basis of pathogenicity

Newcastle disease viruses termed 'pigeon PMV-1 virus
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"SNP frequent
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Viruses; ssRNA negative-strand viruses; Mononegavirales; Paramyxoviridae; Paramyxovirinae; Rubulavirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HN/HNO (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-JUN-2003 (TrEMBLrel. 01-JUN-2003 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-JUN-2003
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q80H91
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Paramyxoviridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Newcastle disease virus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NON
                                                                           Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                               Homo sapiens (Human)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Virol. 134:403-411(1994).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EDGQVMD 7
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (TrEMBLrel.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Paramyxovirinae;
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42.9%;
                                                                               Primates;
                                                                                                                       Chordata;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5C05B2D2CB1AAAA3 CRC64;
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Pred. No.
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                                                                           Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1e+06;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1;
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AC 290V
AC 01-4
DT 01-4
DT 01-7
DT 01-
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Q9QVI5;
01-MAY-2000
01-MAY-2000
01-JUN-2002
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NON TER 9 9
SEQUENCE 9 AA; 980 MW; 7901
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Line A., Slucka Z., Stengrevics A., Li G., Rees R.C.; "Altered Splicing Pattern of TACC1 mRNA in Gastric Cance Submitted (APR-2003) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-OCT-2000 (TrEMBLrel. 15,
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01-OCT-2000 (TrEMBLrel. 15,
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Homo sapiens (Human).
Eukaryota, Metazoa; Chordata, Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N
MEDLINE=92028975; PubMed=1656977;
Milner P.G.;
"Simian sercoma virus transformation of normal rat kidn is associated with markedly increased basic fibroblast expression.";
Biochem. Biophys. Res. Commun. 180:423-430(1991).
NON_TER 1 1
NON_TER 8 8
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Submitted (MAR-2000) to the
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                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Human clotting factor VIII exon 4 through 7.";
                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=10118;
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3; Conserv
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3; Conser
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    866 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            38.3%;
                                                                                                                                                                                                                                                                                                                                                    Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                 Chordata;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                (Fragment)
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0; Mismatches
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Pred. No. 1e+0
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Last sequence update)
Last annotation update)
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                                                                                                                                                                                                                                                                                                                                                 Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
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Gastric Cancer.";
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owth factor
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SEQUENCE

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RESULT 8
Q42452
ID Q424
AC Q424
AC Q424
DT 01-N
DT 01-N
DT 01-J
DB Heat
GN HSP2
OS Trit
OC Euka
OC Spear
OC ST
CO ST
RN [1]
RN [1]
RP SEQU
RC STR
RA Josh
RL SUB
RA JOSH
RL SUB
RM [1]
RR EMB]
DR EMB]
DR EMB]
DR GO;
KW Heal
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Q90493
ID 493
ID 493
ID 010
DT 011
DT
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Best Local :
   Best Local Similarity
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Matches
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Q42452;
01-NOV-1996
                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
STRAIN-CV MUSTANG;
Joshi C.P., Kluev N., Nguyen H.T.;
Submitted (APR-1995) to the EMBL/GenBank/DDBJ databases.
                                                                                           SEQUENCE
                                                                                                                                                                                                      EMBL; L41504; AAA64972.1; -. EMBL; L41503; AAA64971.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                        Spermatophyta; Magnoliophyta;
Triticeae; Triticum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Heat shock protein (
HSP266T1 OR HSP266G2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-NOV-1996 (TrEMBLrel. 01, I
01-JUN-2003 (TrEMBLrel. 24, I
Heat shock protein (Fragment)
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Myoglobin (Fragment).
Myoglobin (Fragment).
Eopsaltria australis (eastern yellow robin).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Eukaryota; Metazoa; Neognathae; Passeriformes; Petroicidae; Eopsal
                                                                                                                       Heat shock.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Viridiplantae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=4565;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Triticum aestivum
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Yta; Liliopsida; Poales; Poaceae; Pooidea
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Last annotation update)
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01-FEB-1997 (TrEMBLrel. 02, Last sequence update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
                                                                                                                                                                                                             EMBL; U50932; AAC44474.1; GO; GO:0016301; F:kinase
                                                                                                                                                                                                   Kinase.
                                                                                                                                                                                                                                                                               transport
                                                                                                                                                                                                                                                                                                               Sage A.E., Proctor W.D., Phibbs P.V.Jr.;
                                                                                                                                                                                                                                                                                                                                  MEDLINE=96427344; PubMed=8830708;
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                                                                                                                                                                                                                                                                                                                                                                                                                              Pseudomonadaceae; Pseudomonas.
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EMBL; X02518; CAA26355.1; -.

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Bollschweiler C., Kuehn R., Klein
"Non-repetitive AT-rich sequences
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Archaea; Euryarchaeota; Methanococci; Methanococcales; Methanococcaceae; Methanococcus.
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P83530;
01-JUN-2003 (TrEMBLrel. 24, Created)
01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
Unknown protein from 2D-page (Fragment).
Lactobacillus sanfranciscensis (Lactobacillus sanfrancisco).
Bacteria; Firmicutes; Lactobacillales; Lactobacillus.
Lactobacillus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "High pressure effects step-wise altered Lactobacillus sanfranciscensis.";
Proteomics 2:765-774 (2002)
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SEQUENCE
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Mammalia; Eutheria;
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01-JUN-2003
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                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens (Human)
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                                                                                                                                                             SEQUENCE
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                                                                                                                                                                                                                      hypertension.";
FEBS Lett. 542:
                                                                                                                                                                                                                                                            "Preliminary characterisation gene: identification of a new
                                                                                                                                                                                                                                                                                                      Zalba G
                                                                                                                                                                                                                                                                                                                    Moreno M.U., San Jose
                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
MEDLINE=22615572; PubMed=12729892;
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PROTEIN IS: 15
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polypeptide (Fragment).
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Pred. No. 1e+C
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Pred. No. 1e+06;
1; Mismatches
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Catarrhini;
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J. Parasitol. 0:0-0(2000).
EMBL; AF249695; AAF79153.1; -
EMBL; AF249692; AAF79150.1; -
EMBL; AF249693; AAF79151.1; -
EMBL; AF249694; AAF79152.1; -
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Q9N6M5;
01-OCT-2000
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SEQUENCE
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01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-OCT-2000 (TrEMBLrel. 15, Last annotation update)
Dihydrofolate reductase thymidylate synthase (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
STRAIN=RH, COUGAR TC751G34,
Lehmann T., Blackston C.R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Toxoplasma gondii.
Eukaryota; Alveolata;
                                                                                                                                                                 EMBL;
                                                                                                                                                                           and sequencing of the 3' region from HSP70 gene family."; Plant Mol. Biol. 30:641-646(1996).
                                                                                                                                                                                                                 SEQUENCE FROM N.A.
STRAIN-CV MUSTANG;
MEDLINE-96189275; PubMed-8605312;
Joshi C.P., Kumar S., Nguyen H.T.;
"Application of modified differential
                                                                                                                                                                                                                                                                                                         Heat shock protein (Fragment).
HSP70C OR HSP70A OR HSP70B.
Triticum aestivum (Wheat).
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooidea
Triticeae; Triticum.
                                                                                                                                                                                                                                                                                                                                                                                    Q42507;
01-NOV-1996 (TrEMBLrel. 01,
01-NOV-1996 (TrEMBLrel. 01,
01-JUN-2003 (TrEMBLrel. 24,
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L41505; AAB02331.1;
L41506; AAB02332.1;
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16.7%;
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                                                                                          71B2CB1B10532768 CRC64;
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three putative members
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QB8553 PRELIMINARY; PRT; 9 AA.
AC Q88953, PRELIMINARY; PRT; 9 AA.
AC Q88953, PT 01-NOV-1996 (TrEMBLrel 01, Last sequence update)
DT 01-NOV-1996 (TrEMBLrel 08, Last annotation update)
GN B13R/SPT-2.
GN B13R/SPT-2.
GN H3R/SPT-2.
GN VACCINIA VIRUSE, NO RNA stage; Poxviridae; Chordopoxvirinae;
CC Viruses; dSDNA viruses, no RNA stage; Poxviridae; Chordopoxvirinae;
CC Viruses; dSDNA viruses, no RNA stage; Poxviridae; Chordopoxvirinae;
CC Viruses; dSDNA viruses, no RNA stage; Poxviridae; Chordopoxvirinae;
CC Viruses; dSDNA viruses, no RNA stage; Poxviridae; Chordopoxvirinae;
CC Viruses; dSDNA viruses, no RNA stage; Poxviridae; Chordopoxvirinae;
CC Viruses; dSDNA viruses, no RNA stage; Poxviridae; Chordopoxvirinae;
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CC Viruses; dSDNA viruses, no RNA stage; Poxviridae; Chordopoxvirinae;
CC Viruses, no RNA stage; Poxviridae; Chordopoxvirinae;
CC Viruses, no RNA stage; Poxviridae; Chordopoxvirinae;
CC Viruses, no RNA stage; Poxviridae; Chordopoxirinae;
CC Viruses, no RNA stage; Poxviridae; Chordopoxirinae;
CC Viruses, no RNA stage; Poxviridae; Chordopoxiriae;
CC Viruses, no RNA stage; Poxviridae; Chordopoxiriae;
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Listing first 45 summaries
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                                                                                                                                                                           Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                  Scoring table:
                                                                                                                                                                                                                                                                                                           Title:
                                                                                                                                                                                                                                                                                 Sequence:
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                                                                                                                                                                                                                                                                                                                                                                                            OM protein -
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                                                                                                                                      length: 0
length: 2000000000
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47
1 EDGQVMDVD 9
PIR_78:*
1: pir1:*
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3: pir3:*
4: pir4:*
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Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                       283366 seqs, 96191526 residues
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                                                                                                                                                                                                                                                                                                                                                                                                                              GenCore version 5.1.6 (c) 1993 - 2004 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                               22.782 Million cell updates/sec
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

7) (C	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	00	7	9	. UT	4	· w	2	щ.	No.	Result
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4	44	43	42	41	40	39	38	37	36	ω U	34	ω ω	32	31	30
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PIWL	PIWLEP	D86183	T00955	C86799	B84888	D70786	AB3610	B23971	S61872	A97340	S52640	T24207	H64350	A37397	I40330
· F			•	hypothetical prote	probable methionin	probable govT prot	multidrug resistan	monophenol monooxy	hypothetical prote					hypothetical prote	Cpn10 protein (Gro

ALIGNMENTS

A;Molecule type: DNA
A;Residues: 2-428 <UED>
A;Cross-references: GB:J00222; NID:g184755
R;Zhang, K.; Saxon, A.; Max, E.E. A;Cross-references: GB:L00022; GB:J000227; GB:V00555; NID:g185035 R;Ueda, S.; Nakai, S.; Nishida, Y.; Hisajima, H.; Honjo, T. EMBO J. 1, 1539-1544, 1982 A;Title: Long terminal repeat-like elements flank a human immunoglobulin epsilon pseudoge A;Reference number: A23195; MUID:84207910; PMID:6327276 A;Accession: A23195 C;Species: Homo sapiens (man)
C;Species: Homo sapiens (man)
C;Accession: A22771; A23195; PH1214; A93491; A90824; A94418; B93933; S02438; A53116; C460; R;Flanagan, J.G.; Rabbitts, T.H.
EMBO J. 1, 655-660, 1982
A;Title: The sequence of a human immunoglobulin epsilon heavy chain constant region gene, A;Reference number: A22771; MUID:84236029; PMID:6234164 A; Molecule type: DNA A; Residues: 1-428 < FLA> 뮹 Ş A;Introns: 103/1; 209/1; 317/1 C;Superfamily: immunoglobulin C region; immunoglobulin homology F;336-405/Domain: immunoglobulin homology <IMM> A;Status: preliminary; translated from GB/EMBL/DDBJ A;Molecule type: DNA A;Residues: 1-426 <RES> R;Sakoyama, Y.; Hong, K.

Proc. Natl. Acad. Sci. U.S.A. 84, 1080-1084, 1987

A;Title: Nucleotide sequences of immunoglobulin epsilon

A;Reference number: 136948; MUID:87147196; PMID:3103123 Ig epsilon-chain - chimpanzee (fragment)
C;Species: Pan troglodytes (chimpanzee)
C;Date: 04-Oct-1996 #sequence_revision 04-Oct-1996 #text_change RESULT 1 I36948 A; Accession: A22771 RESULT 2 A; Cross-references: GB:M15398; NID:g176797; PIDN:AAA35416.1; PID:g176798 C; Accession: C; Genetics: Ig epsilon chain C region - human A; Accession: I36948 Query Match Best Local S Matches 9 Local Similarity les 9; Conserv 149 EDGQVMDVD 157 1 EDGQVMDVD 9 Conservative 100.0%; Score 47; DB 2 100.0%; Pred No. 0.26; 0; Mismatches DB 2; 0 Length 426; Indels genes of chimpanzee and orangutar 21-Jan-2000 0; Gaps 0,

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A;Title: Two unusual forms of human immunoglobulin E encoded by alternative A;Reference number: PH1214; MUID:92308839; PMID:1613458
A;Accession: PH1214
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A;Residues: 320-428 <ZHA>
A;Reference: EMBL:X63693; GB:S38668; NID:g32987
A;Reference number: A33491; MUID:83168897; PMID:6300763
A;Accession: A33491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          J. Biol. Chem. 269, 456-462, 1994
A;Title: Complex alternative RNA splicing of epsilon-immunoglobulin transcripts produces
A;Reference number: A53116; MUID:94103254; PMID:8276835
A;Accession: A53116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Molecule type: protein
A;Residues: 'GAWTL',6,'X',8-16,'B',18-43,'B',45-52,55-92,95-97,'B',99-121,'B',123,'L',12
A;Experimental source: myeloma protein Nd
R;Kenten, J.H.; Molgaard, H.V.; Houghton, M.; Derbyshire, R.B.; Viney, J.; Bell, L.O.; G
Proc. Natl. Acad. Sci. U.S.A. 79, 6661-6665, 1982
Proc. Natl. Acad. Sci. U.S.A. 79, 6661-6665, 1982
A;Title: Cloning and sequence determination of the gene for the human immunoglobulin eps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Cross-references: GB:L00022; GB:J00227; GB:V00555; NID:g185035 R;Max, E.E.; Battey, J.; Ney, R.; Kirsch, I.R.; Leder, P. Cell 29, 691-699, 1982
A;Title: Duplication and deletion in the human immunoglobulin epsilon
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A; Residues: 1-428 < SEN>
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A;Accession: A94418
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A;Note: this sequence difference may be due to polymorphism R;Bennich, H.H.; Johansson, S.G.O.; Von Bahr-Lindstrom, H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A, Title: Purification and characterization A, Reference number: S02438; MUID:88083554; A, Accession: S02438
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                                                                                                                                                                                                                                                                                                                    Eur. J. Immunol. 23, 159-167, 1993
A;Title: Characterization of four novel epsilon chain mRNA
A;Reference number: A46536; MUID:93122085; PMID:8419166
A;Accession: C46536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R; Ikeyama, S.
FEBS Lett. 224, 306-310, 1987
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A;Residues: 1-40;68-114;427-428 <KEN>
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A;Accession: B93933
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A;Residues: 1-358,'L',360-428 <MAX>
A; Molecule type: mRNA
A; Residues: 382-391 < A; Cross-references: G;
                                                                                                                    A;Note: sequence extracted A;Accession: D46536
                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Note: sequence R;Hellman, L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Experimental source: myeloma U266-derived cell line AF-10
A;Note: sequence extracted from NCBI backbone (NCBIN:141701, NCBIP:141702)
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A;Residues: 320-428 <ZH2>
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                                                                                        A;Status: preliminary; not
                                                                                                                                                                           A;Cross-references: GB:S55273; NID:g263166; PIDN:AAB24857.1; PID:g263167
A;Experimental source: B cell myeloma U-266
                                                                                                                                                                                                                                        A;Molecule type: mRNA
A;Residues: 382-426 <HEL>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Status: preliminary
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      GB:S55276; NID:g263168; PIDN:AAB24858.1; PID:g263169
                                                                                           compared with conceptual
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            hypothetical protein T16K5.160 - Arabidopsis thalia C;Species: Arabidopsis thaliana (mouse-ear cress) C;Date: 04-Feb-2000 #sequence_revision 04-Feb-2000 C;Accession: T46047
                                                                                                                                RESULT 4
T46047
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A;Cross references: GDB:119335; OMIM:147180
A;Map position: 14432.33-14432.33
A;Introns: 1/1; 104/1; 211/1; 319/1
C;Complex: An immunoglobulin heterotetramer subunit consists of two identical light (kap) hain disulfide bonds. In some cases, such as IgA and IgM, the subunits associate into lar c;Superfamily: immunoglobulin C region; immunoglobulin homology C;Keywords: alternative splicing; duplication; glycoprotein; heterotetramer; immunoglobulin C;Keywords: alternative splicing; duplication; glycoprotein; heterotetramer; immunoglobulin; 22-87/Domain: immunoglobulin homology <IM1>
                                                                                                                                                                                                                                                                                                                                                                                                        RiNG, W.V.; Kennedy, S.P.; Mahairas, G.G.; Berquist, B.; Pan, Leithauser, B.; Keller, K.; Cruz, R.; Danson, M.J.; Hough, I Uung, K.H.; Alam, M.; Freitas, T. Proc. Natl. Acad. Sci. U.S.A. 97, 12176-12181, 2000 A; Authors: Hou, S.; Daniels, C.J.; Dennis, P.P.; Omer, A.D.; E. A; Title: Genome sequence of Halobacterium species NRC-1. A; Reference number: A84160; MUID:20504483; PMID:11016950 A; Accession: G84322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             F;128-195/Domain: immunoglobulin homology <IM2>
F;232-301/Domain: immunoglobulin homology <IM3>
F;338-407/Domain: immunoglobulin homology <IM3>
F;338-407/Domain: immunoglobulin homology <IM4>
F;338-407/Domain: immunoglobulin homology <IM4>
F;14/Disulfide bonds: interchain (to light chain) #status predicted
F;15-105,29-85,135-193,239-299,345-405/Disulfide bonds: #status predicted
F;21,49,99,146,252,275/Binding site: carbohydrate (Asn) (covalent) #status
F;121,209/Disulfide bonds: interchain (to heavy chain) #status predicted
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A;Experimental source: B cell myeloma U-266
A;Note: sequence extracted from NCBI backbone (NCBIP:123483)
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A;Note: sequence_extracted from NCBI backbone (NCBIP:125299)
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C;Species: Halobacterium sp. NRC-1
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C; Superfamily:
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A; Residues: 1-118 <STO>
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Matches 7
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Best Local
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Pred. No. 0.26;
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                                                                                                                   Indels
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G.; Jablor
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Arabidopsis thaliana

#text_change 04-Feb-2000

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probable transcription regulator Cj0466 [imported] - Campylobacter jejuni (C;Species: Campylobacter jejuni C;Date: 31-Mar-2000 #sequence_revision 31-Mar-2000 #text_change 03-Jun-2002 C;Accession: B81391
R;Parkhill, J; Wren, B.W.; Mungall, K.; Ketley, J.M.; Churcher, C.; Basham, D.; Chillin C.W.; Quail, M.; Rajandream, M.A.; Rutherford, K.M.; VanVliet, A.; Whitehead, S.; Barrel Nature 403, 665-668, 2000
A;Title: The genome sequence of the food-borne pathogen Campylobacter jejuni reveals hyp. A;Accession: E81391
A;Accession: E81391
A;Status preliminary
A;Molecule type: DNA
A;Cross-references: GB:AL139075; GB:AL111168; NID:g6967817; PIDN:CAB75104.1; PID:g696793
A;Experimental source: serotype O2, strain NCTC 11168
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E81391
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Proc. Natl. Complete Genome Sequence of Caulobacter crescentus.
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C;Superfamily: threonine-tRNA ligase
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A;Cross-references: EMBL:AL132965
A;Experimental source: cultivar Columbia; BAC clone T16K5
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A; Residues: 1-655 <STO>
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A;Accession: G87306
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A; Accession: T46047
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Rest Local Similarity
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Local Similarity 75.0%;
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hypothetical protein B1D1.160 C; Species: Neurospora crassa
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A; Residues: 1-846 < KUR >
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R;Kaneko, T.; Nakamura, Y.; Wolk, C.P.; Kuritz, T.; Sasamoto, Nakazaki, N.; Shimpo, S.; Sugimoto, M.; Takazawa, M.; Yamada, DNA Res. 8, 205-213, 2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Note: Nostoc sp. strain PCC 7120 is a synonym of C;Date: 14-Dec-2001 #sequence_revision 14-Dec-2001 C;Accession: AI2336
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          R;Smith, D.R.; Doucette-Stamm, L.A.; Deloughery, C.; Lee, H.; Dubois, J.; Aldredge, T.; I Qiu, D.; Spadafora, R.; Vicaire, R.; Wang, Y.; Wierzbowski, J.; Gibson, R.; Jiwani, N. ki, S.; Church, G.M.; Daniels, C.J.; Mao, J.; Rice, P.; Noelling, J.; Reeve, J.N. J. Bacteriol. 179, 7135-7155, 1997
A;Title: Complete genome sequence of Methanobacterium thermoautotrophicum Delta H: funct: A;Reference number: A69000; MUID:98037514; PMID:9371463
                                                                                                                                                                                                                                                                                                                      A;Cross-references: GB:BA000019; PIDN:BAB75947.1; PID:g17133383; GSPDB:GN00179 A;Experimental source: strain PCC 7120
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C;Species: Nostoc sp. PCC 7120
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E69160
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nes 5; Conserv
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Pred. No. 1.2e
2; Mismatches
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    Neurospora crassa

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, M.; Yasuda, N
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09-Dec-2002
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RESULT 11
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A;Cross-references: EMBL:U00054; NID:g485140; PID:g485141; PIDN:AAA50715.1; CESP:K07E12
A;Experimental source: strain Bristol N2
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A;Residues: 1-1275 <SCH>
A;Residues: 1-1275 <SCH>
A;Cross-references: EMBL:AL355927; GSPDB:GN00116; NCSP:B1D1.160
A;Experimental source: BAC clone B1D1; strain OR74A
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A;Accession: T49362
                                                                                                                                                                      R;Finan, T.M.; Weidner, S.; Wong, K.; Buhrmester, J.; Chain, P.; Vorholter, F.J.; Hernan Proc. Natl. Acad. Sci. U.S.A. 98, 9889-9894, 2001
A;Title: The complete sequence of the 1,683-kb pSymB megaplasmid from the N2-fixing endo A;Reference number: A95842; MUID:21396508; PMID:11481431
A;Accession: C95882
                                                                                                                                                                                                                                                                                                  probable transcription regulator protein [imported] - Sinorhizobium meliloti
C,Species: Sinorhizobium meliloti
C;Date: 24-Aug-2001 #sequence_revision 24-Aug-2001 #text_change 30-Sep-2001
C;Accession: C95882
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A;Description: The sequence of C. elegans cosmid K07E12
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A; Accession: T16580
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            T16580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Map position: 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Gene: NCSP:B1D1.160
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A;Experimental source: strain 1021, megaplasmid pSymB R;Galibert, F.; Finan, T.M.; Long, S.R.; Puhler, A.; Abola, pela, D.; Chain, P.; Cowie, A.; Davis, R.W.; Dreano, S.; Fe
                                                                                                                         A; Status: preliminary
A; Molecule type: DNA
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                                                                             A;Cross-references: GB:AL591985; PIDN:CAC48723.1; PID:g15140196; GSPDB:GN00167
                                                                                                     A;Residues: 1-203 <KUR>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Introns: 46/3; 85/2; 201/1; 278/2; 470/2; 817/1; 927/1; 6014/3; 6159/3; 6665/2; 7266/3; 7895/3; 8669/3; 8726/3;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EDGQLVEID 11718
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55.6%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         score 35; DB Pred. No. 1.9e 2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 35;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 2;
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       Federspiel,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     960/3; 1265/1; 1322/1; 1478/3;
9803/3; 10937/3; 12234/2; 1229
                            P.; Ampe,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
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          N.A.;
          F.; Barloy-Hubler
N.A.; Fisher, R.F.
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                                 A; ACCESSACE.
A; Status: preliminary
A; Molecule type: DNA
A; Molecule type: DNA
A; Cross-references: GB: AL445566; PID:g14089599; PIDN: CAC13359.1;
A; Cross-references: GB: AL44566; PID:g14089599; PIDN: CAC13359.1;
                                                                                                                                                                             R;Chambaud, I.; Heilig, R.; Ferris, S.; Barbe, V.; Samson, D.; (Nucleic Acids Res. 29, 2145-2153, 2001
A;Title: The complete genome sequence of the murine respiratory A;Reference number: A99512; MUID:21267165; PMID:11353084
A;Accession: B90535
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                                                                                                                                                                                                                                                                                                     hypothetical protein MYPU_1860 [imported] - Mycoplasma pulmonis (strain UAB C;Species: Mycoplasma pulmonis C;Date: 24-May-2001 #sequence_revision 24-May-2001 #text_change 03-Aug-2001 C;Accession: B90535
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       A;Experimental source: strain C;Genetics:
A;Gene: MYPU_1860
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D.; Galisson, F.; Moszer,

pathogen

Mycoplasma

pulmo н :

GSPDB:GN00153

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R.Theologis, A.; Ecker, J.R.; Palm, C.J.; Federspiel, N.A.; Kaul, S.; White, O.; Alonso, Chin, C.W.; Chung, M.K.; Conm, L.; Conway, A.B.; Conway, A.R.; Creasy, T.H.; Dewar, K.; ansen, N.F.; Hughes, B.; Huizar, L.
Nature 408, 816-820, 2000
A.Authors: Hunter, J.L.; Jenkins, J.; Johnson-Hopson, C.; Khan, S.; Khaykin, E.; Kim, C.; C.A.; Li, J.H.; Li, Y.; Lin, X.; Liu, S.X.; Liu, Z.A.; Luros, J.S.; Maiti, R.; Marziali, R.izzo, M.; Rooney, T.; Rowley, D.; Sakano, H.
A.;Authors: Salzberg, S.L.; Schwartz, J.R.; Shim, P.; Southwick, A.M.; Sun, H.; Tallon, A.;Authors: Salzberg, S.L.; Schwartz, J.R.; Shim, P.; Southwick, A.M.; Sun, H.; Tallon, A.;Authors: Salzberg, S.L.; Schwartz, J.R.; Shim, P.; Southwick, A.M.; Sun, H.; Tallon, A.;Authors: Salzberg, S.L.; Schwartz, J.R.; Shim, P.; Southwick, A.M.; Sun, H.; Tallon, A.;Title: Sequence and analysis of chromosome 1 of the plant Arabidopsis.
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D96531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               L.; Hyman, R.W.; Jones, T. Science 293, 668-672, 2001
A;Authors: Kahn, D.; Kahn, M.L.; Kalman, S.; Keating, D.H.; Kiss, E.; Komp, C.; Lelaure, hebault, P.; Vandenbol, M.; Vorholter, F.J.; Weidner, S.; Wells, D.H.; Wong, K.; Yeh, K.(A;Title: The composite genome of the legume symbiont Sinorhizobium meliloti.
A;Reference number: A96039; MUID:21368234; PMID:11474104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   hypothetical protein F13F21.9 [imported] - Arabidopsis thaliana C;Species: Arabidopsis thaliana (mouse-ear cress) C;Date: 02-Mar-2001 #sequence_revision 02-Mar-2001 #text_change 31-Mar-2001 C;Accession: D96531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Genome: plasmid
                                                                                                                                                                                                A; Gene: F13F21.9
A; Map position: :
                                                                                                                                                                                                                                                                                                                                 A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                     A;Reference number: A86141; MUID:21016719; PMID:11130712
A;Accession: D96531
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                                                                                                                                                                                                                                                       C; Genetics:
                                                                                                                                                                                                                                                                                  A;Residues: 1-210 <STO>
A;Cross-references: GB:AE005173; NID:g5430754; PIDN:AAD43154.1; GSPDB:GN00141
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                                                                                             Query Match
Best Local S
Matches 5
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136 DDGEVVDMD 144
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                                                                                                Similarity 5; Conserv
                                              EDGQVMDVD
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                                                                                                  Conservative
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                                                                                                                           72.3%;
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Pred. No.
                                                                                                                           Score 34;
Pred. No.
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                                                                                                        Mismatches
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                                                                                                                           DB;
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Maiti, R.; Marziali,
                                                                                                  Gaps
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C;Accession: G84244

R;Ng, W.V.; Kennedy, S.P.; Mahairas, G.G.; Berquist, B.; Pan, M.; Shukla, H.D.; Lasky, S; Leithauser, B.; Keller, K.; Cruz, R.; Danson, M.J.; Hough, D.W.; Maddocks, D.G.; Jablc Jung, K.H.; Alam, M.; Freitas T.

Proc. Natl. Acad. Sci. U.S.A. 97, 12176-12181, 2000

A;Authors: Hou, S.; Daniels, C.J.; Dennis, P.P.; Omer, A.D.; Ebhardt, H.; Lowe, T.M.; Li A;Title: Genome sequence of Halobacterium species NRC-1.

A;Reference number: A84160; MUID:20504483; PMID:11016950
Search completed: August 23, 2004, 10:40:37 Job time : 41 secs
                                                                                                        닭
                                                                                                                                                                                                                                                                                             A;Gene: lig
C;Superfamily: DNA ligase
                                                                                                                                                                                                                                                                                                                                                       A;Molecule type: DNA
A;Restidues: 1-561 <STO>
A;Cross-references: GB:AE004437; NID:g10580445; PIDN:AAG19323.1; GSPDB:GN00138
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            G94244

G94244

DNA ligase [imported] - Halobacterium sp. NRC-1

C;Species: Halobacterium sp. NRC-1

C;Date: 02-Feb-2001 #sequence_revision 02-Feb-2001 #text_change 16-Feb-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R;Klenk, H.P.; Clayton, R.A.; Tomb, J.F.; White, O.; Nelson, K.E.; Ketchum, K.A.; Dodson; Pleischmann, R.D.; Quackenbush, J.; Lee, N.H.; Sutton, G.G.; Gill, S.; Kirkness, E.F. Glodek, A.; Zhou, L.; Overbeek, R.; Gocayne, J.D.; Weidman, J.F.; McDonald, L. Nature 390, 364-370, 1997

Nature 390, 364-370, 1997

A;Authors: Utterback, T.; Cotton, M.D.; Spriggs, T.; Artiach, P.; Kaine, B.P.; Sykes, S. Smith, H.O.; Woese, C.R.; Venter, J.C.
A;Title: The complete genome sequence of the hyperthermophilic, sulfate-reducing archaed A;Reference number: A69250; MUID:98049343; PMID:9389475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Status: preliminary; nucleic acid sequence not shown; translation not shown A;Molecule type: DNA A;Molecule type: DNA A;Residues: 1-286 <KLE> A;Cross-references: GB:AE001093; GB:AE000782; NID:g2689416; PIDN:AAB91050.1; PID:g265046
                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Status: preliminary
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Best Local
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Matches 4; Conservative
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nes 6; Conserv
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                                                                                                                                                1 EDGQVMDVD 9
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Similarity 55.6%;
5; Conservative
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                                                                                                                                                                                            3; Mismatches
                                                                                                                                                                                                                 Score 34; DB 2;
Pred. No. 1.2e+02;
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Pred. No. 49;
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Friede M, Greenwood J, Hewitt E, Lamont A, Mason S; Turnell WG, Van Mechelen MP, Vinals Y De BassolsC;

(SMIK)

SMITHKLINE BEECHAM BIOLOGICALS. PEPTIDE THERAPEUTICS LTD.

WPI; 2000-572073/53.

Claim 2; Page 5; 129pp; English.

Peptides useful for treating, preventing and ameliorating allergic diseases, comprising an isolated surface exposed group of a specific domain from immunoglobulin E.

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Aab49428 Peptide #						Adc81368 Bovin THF	C. his		MHC bi	-		Aay61788 Cadherin-	Aay48066 Immunoqen	Aay00372 Fragment	Aay61785 Cadherin	WILL UIAOS 29219.IH				Aay61779 Cadherin-

ALIGNMENTS

25-EBB-1999 29-MAR-1999; 07-MAY-1999; 07-MAY-1999; 07-AUG-1999; 07-AUG-1999; 07-SEP-1999; 07-SEP-1999; 23-NOV-1999; Epitope; mimotope; human; immunoglobulin E; IgE; C-epsilon-2 domain; allergic disease; immunoprophylaxis; immunotherapy; antiallergic; immunosuppressive; vaccine; histamine release inhibitor; immunogen; 22-FEB-2000; 2000WO-EP001455 31-AUG-2000 WO200050460-A1. Homo sapiens. allergy; atopy. IGE C-epsilon-2 domain surface exposed epitope peptide P1 SEQ ID NO:1. 05-JAN-2001 AAB25907; AAB25907 standard; peptide; (first entry) 99GB-00018594. 99GB-00018603. 99GB-00021046. 99GB-00021047. 99GB-00025619. 99GB-00027698. 99GB-00007151. 99GB-00010537. 99GB-00010538. 99GB-00004405 9 AA

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Matches 9
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25-FEB-1999;
25-FEB-1999;
13-AUG-1999;
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protozoacide; Alzheimer's disease;
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prostate cancer; Haemophilus influenzae; vaccine; infectious disea
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                                                                                                                                                                   Immunogens and vaccine comprising the immunogen useful for preventing and treating infectious diseases e.g. malaria and chronic disease e.g. cancer, comprises peptide and carrier from protein D of influenzae.
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Pred. No. 1.4e+06;
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The present invention describes (Ia) and a carrier (Ib) derived

an immunogen (I) comprising a from protein D of Haemophilus

peptide influenzae

Best Local Similarity
Matches 9; Conserv

Conservative

100.0%; Score 47; DB 4; 100.0%; Pred. No. 1.4e+06; Live 0; Mismatches 0;

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Indels

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Query Match

Sequence 9

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Claim 9;

Page

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English

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            excipient; (2) preparation of (1), comprising conjugating a peptide protein D or its fragment; and (3) preparation of a vaccine of (1), comprising formulating (1) with an excipient. (1) has cytostatic, antiallerate nontrantal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 9 AA;
                           The present invention relates to a composition comprising allergy peptides linked by an inert carrier. The allergy peptides are derived from Immunoglobulin E (IgE) or IgE receptor. The present peptide is one such peptide from IgE. The composition is useful as a vaccine or for manufacturing a medicament for the prophylaxis or treatment of allergy. In particular, for boosting an anti-allergy immune response in an individual susceptible to an allergic response
                                                                                                                                                                                 New vaccine comprising allergy peptides linked by an inert carrier, useful for boosting an anti-allergy immune response in an individual susceptible to an allergic response.
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                                                                                                                                                       Claim 5; Page 20; 26pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The present invention relates to linkage methodology for use in the conjugation of compounds (e.g. peptides) to carrier vehicles (e.g. macromolecules, polymers, dendrimers, proteins) to produce biological and immunological constructs. The invention provides a method for linking an pharmaceutical composition or a vaccine. The invention describes peptides derived from or mimotopes of the Cepsilon2, Cepsilon3 or Cepsilon4 regions of human immunoglobulin E (IgE) which are used to produce conjugated compounds. The compounds or compositions of the invention are useful in the manufacture of a medicament for the treatment of IgE mediated diseases. The invention allows for controlled conjugation of a macronic confidence of a medicament for the treatment of IgE mediated diseases. The invention allows for controlled conjugation of a medicament for the free mediated diseases. The mediated conjugation of a medicament for the free mediated diseases.
                                                                                                                                                                                                                                                                                                                                                                                      peptide epitope (antigen) to a protein so as to form an immunogenic conjugate which may be able to raise a protective antibody response in animal or human patient. AAU16632-AAU16913 represent peptides derived from or mimotopes of the Cepsilon2/Cepsilon3/Cepsilon4 region of human
                                                                                                                                                                                                                                                                                                                     Sequence 9
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22-FEB-2000; 2000GB-00004096.
22-AUG-2000; 2000GB-00020707.
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Best Local :
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                                                                                                                  23-OCT-2003
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                                                                                                                                                                                                                                                                                                                                          hepatitis B infection; T-cel stimulator; B-cell
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Page M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21-FEB-2002; 2002US-00080299.
21-FEB-2002; 2002US-00082014.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   molecules.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2003-852775/79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cytotoxic T lymphocyte; CTL; tumour; antigen presenting cell; allergy; lupus; autoimmune disease; rheumatoid arthritis; autoimmune nephritis; psoriasis; APC; multiple sclerosis; autoimmune thyroiditis; hay fever; inflammatory bowel disease; insulin dependent diabetes; cell therapy; Crohn's disease; allergic rhinitis; graft versus host disease; asthma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human immunoglobulin E (IgE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        28-MAY-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAE35091;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  psoriasis; APC; multiple sclerosis; autoimmune thyroidi
inflammatory bowel disease; insulin dependent diabetes;
Crohn's disease; allergic rhinitis; graft versus host d
transplant rejection; human; immunoglobulin E; IgE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAE35091 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
    Producing cytotoxic T lymphocytes for treating e.g. autoimmune diseases
                                                                                 WPI; 2003-120673/11
                                                                                                                                                                                                                                                                                                                15-MAY-2001; 2001US-0291300P.
                                                                                                                                                                                                                                                                                                                                                                                                  13-MAY-2002; 2002WO-US015341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21-NOV-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200292773-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              transplant rejection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               the immunoigenic loop and/or at the C-terminus.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FRIEDE M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity 9; Conserv
                                                                                                                                                                                                                                           ORTHO-MCNEIL PHARM INC
                                                                                                                                                                  Jackson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EDCOVMDVD
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                  ¥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          peptide; 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%;
                                                                                                                                                                      Peterson PA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HLA-A2 peptide motif #29.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 47;
Pred. No.
                                                                                                                                                                      Shi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           graft versus host disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1.4e+06;
thes 0;
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                                                                                                                                                                  Kong
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RESULT 8
AAB25923
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The invention relates to a method of producing cytotoxic T lymphocytes CC (CTLs) specific for one or more non-tumour self antigen T cell epitopes. CC The method involves loading antigen presenting cells (APCs) having class CC I major histocompatibility complex molecules with the T cell epitopes. CC and culturing the CD8+ T cells with the APCs to activate precursor CD8+ T CC cells specific for the T cell epitopes. The invention is useful for CC treating autoimmune disease including rheumatoid arthritis, psoriasis, CC lupus, autoimmune peptritis, multiple sclerosis, autoimmune thyroiditis, cc insulin dependent diabetes, Crohn's disease, inflammatory bowel disease, CC graft versus host disease and transplant rejection and/or allergic CC disease such as food allergy, hay fever, allergic rathinitis, allergic The present sequence is human immunoglobulin E (IgE) HLA-A2 peptide motif. This peptide is used in the exemplification of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       comprises culturing CDB+ T cells with antigen presenting cells to activate precursor CDB+ T cells specific for T the cell epitopes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 9 AA;
                                                                                                                                                                                                                                                                                                                                                                                 Epitope; mimotope; human; immunoglobulin E; IgE; C-epsilon-2 domain allergic disease; immunoprophylaxis; immunotherapy; antiallergic; immunosuppressive; vaccine; histamine release inhibitor; immunogen;
                                       Dyson M,
Randall
                                                                                                                                                                                                                                                                                                                                                                     allergy;
                                                                                                                                                                                                                                                                                                                                                                                                                                    P1 mimotope peptide P15s SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 05-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAB25923
                                                                                                                                                                                                                                                                                                                    WO200050460-A1
                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                 07-SEP-1999;
29-OCT-1999;
                                                                                                                                                                                                            29-MAR-1999
07-MAY-1999
                                                                                                                                                                                                                                                                22-FEB-2000; 2000WO-EP001455
                                                                                                                   23-NOV-1999
                                                                                                                                                            07-SEP-1999
                                                                                                                                                                        07-AUG-1999;
                                                                                                                                                                                     07-AUG-1999;
                                                                                                                                                                                                 07-MAY-1999;
                                                                                                                                                                                                                                      25-FEB-1999;
                                                                               (PEPT-)
                                                                                          (SMIK )
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EDGOVM 6
                                                                                            SMITHKLINE BEECHAM BIOLOGICALS
                                                                               PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   standard; peptide;
                                         Friede M,
Turnell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                48; 49pp;
                                                                                                                                                99GB-
                                                                                                                                                                                                  99GB-00010537
99GB-00010538
                                                                                                                                                           99GB-00018603
99GB-00021046
                                                                                                                                                                                   99GB-00018594
                                                                                                                      99GB-00025619
99GB-00027698
                                                                                                                                                                                                                           99GB-00007151
                                                                              THERAPEUTICS
                                                                                                                                                 -00021047
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                                       Greenwood J, wG, Van Meche
                                          Van Mechelen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 31;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                        ID NO:17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                          Hewitt E, Lamont
len MP, Vinals Y I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1.4e+06;
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                                           De BassolsC;
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RESULT 9
AAU16648
ID AAU1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               surface exposed group/epitope (EI) of C-epsilon-2 domain (D) of C immunoglobulin E (IgE), or its mimotope. Also described are: (1) an CC immunogen (II) for treating allergy comprising (I); (2) a vaccine (III) Cf or treating allergies comprising (II); (3) a ligand (IV) capable of CC (Is) comprising (II); (3) a ligand (IV) capable of CC (Is) comprising (II); (3) a comprising (IV); (6) an immunogen (II) can comprising (II); (3) a pharmaceutical composition (PC) comprising (IV); (6) an immunogen (III) by producing (III) can comprising (III); (1) can comprising (III); (2) and comprising (III) are useful comparable of being recognised by (IV); (6) an immunogen (III) are useful comparable of being recognised by (IV); (6) an immunogen (III) can comprising (III); (II) and (III) are useful comparable of the manufacture of medicaments for treating and comparable of the manufacture of medicaments for treating and comparable of the manufacturing medicaments for treating and process (IV) is useful in diagnostics and in the affinity purification of conclusing anti-IgE antibodies from blood. (I), (III) and PC are useful conclusing anti-IgE antibodies from blood. (I), (III) and PC are useful conclusing and patient susceptible to or suffering from allergies. (IV) compiled sequences which are used in the exemplification of the present invariance.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                              WPI; 2001-521967/57.
                                                                                                                                                   21-DEC-1999; 99GB-00030233.
22-FEB-2000; 2000GB-00004096.
22-AUG-2000; 2000GB-00020707.
22-AUG-2000; 2000GB-00020708.
                                                                                                                                                                                                                                                                                                                                                 Synthetic
                                                                                                                                                                                                                                         21-DEC-2000; 2000WO-GB004935
                                                                                                                                                                                                                                                                                                                WO200145745-A2
                                                                                                                                                                                                                                                                                                                                                                                                antibody response.
                                                                                                                                                                                                                                                                                                                                                                                                           Human; linkage technology; conjugated compound; carrier vehicle; epitope
Cepsilon2; Cepsilon3; Cepsilon4; immunoglobulin E; IgE mediated disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAU16648;
                                                                                                      (SMIK )
                                                                                                                                                                                                                                                                             28-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          07-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAU16648 standard; peptide; 7 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             invention
                                                                                                                                                                                                                                                                                                                                                                   sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       present invention describes a peptide (I) comprising an face exposed group/epitope (E1) of C-epsilon-2 domain (D)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 QVMDVD 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4 QVMDVD
                                                                                                ACAMBIS RES LTD.
SMITHKLINE BEECHAM BIOLOGICALS
                                                                                                                                                                                                                                                                                                                                                                                                                                                              P15s derived as mimotope of Cepsilon2 region of human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity 6; Conserv
                                                               Johnson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Page 35; 129pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                               н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   63.8%; Score 30; DB
100.0%; Pred. No. 1.
tive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       63.8%;
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thes 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 7;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                              IgE
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A linkage comprising an

immunogenic conjugate useful

treatment

of.

IgE

immunogenic carrier. The vaccines can be used in the treatment of allergies. The present sequence is a peptide immunogen derived from humanimmunoglobulin E (IGE) suitable to be cyclised and used in the invention

from human

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RESULT 10
ABJO0227
ID ABJO0
XX
ABJO0227
ID C2-SI
XX
DT 02-SI
XX
IMM
VACC
XX
VACC
XX
VACC
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VACC
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VACC
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VACC
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PD 28-
YX
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PF 17
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                                                                      The present invention relates to conjugates suitable for use in vaccines, where the conjugate comprises a disulphide bridge cyclised peptide and an immunogenic carrier. The vaccines can be used in the treatment of
                                                                                                                                                                                                                                                                Conjugate
disulfide
                                                                                                                                                                                                      Claim 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 immunological constructs. The invention provides a method for linking an epitope (e.g. a peptide) to a carrier (e.g. a protein) for use in a pharmaceutical composition or a vaccine. The invention describes peptides derived from or mimotopes of the Cepsilon2, Cepsilon3 or Cepsilon4 regions of human immunoglobulin E (IgE) which are used to produce conjugated compounds. The compounds or compositions of the invention are useful in the manufacture of a medicament for the treatment of IgE mediated diseases. The invention allows for controlled conjugation of a
                                                                                                                                                                                                                                                                                                                                                                                                         Friede M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (SMIK )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22-AUG-2000; 2000GB-00020717.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               17-AUG-2001; 2001WO-EP009576
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    vaccine; antiallergic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human IgE immunogenic peptide SEQ ID NO: 11.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       02-SEP-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABJ00227;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ABJ00227 standard; peptide; 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 7 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            peptide epitope (antigen) to a protein so as to form an immunogenic conjugate which may be able to raise a protective antibody response in an animal or human patient. AAU16632-AAU16913 represent peptides derived from or mimotopes of the Cepsilon2/Cepsilon3/Cepsilon4 region of human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Immunogen;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The present invention relates to linkage methodology for use in the conjugation of compounds (e.g. peptides) to carrier vehicles (e.g. macromolecules, polymers, dendrimers, proteins) to produce biological macromolecules, polymers, dendrimers, proteins) to produce biological
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mediated diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                                     2002-489648/52.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4 QVMDVD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SMITHKLINE BEECHAM BIOLOGICALS. PEPTIDE THERAPEUTICS LTD.
                                                                                                                                                                                                   Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4; Page 21; 48pp; English
                                                                                                                                                                                                                                                          for use in vaccine for the bridge cyclized peptide
                                                                                                                                                                                                                                                                                                                                                                                                         Mason S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    human; IgE; immunoglobulin E; allergy; thio-ether linkage;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             63.8%;
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                         Turnell WG,
                                                                                                                                                                                                English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 30;
Pred. No.
                                                                                                                                                                                                                                                    treatment of allergy, co
e and immunogenic carrier
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                   Vinals Y BassolsC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 4; L
1.4e+06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 7;
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                                                                                                                                                                                                                                                                                  comprises
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
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QVMDVD 9

Matches Query Match

6

Conservative

63.8%; Score 30; 100.0%; Pred. No. Live 0; Mismatc

Mismatches

1.4e+06; hes 0; DB 5;

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Gaps

0

Length 7;

Local Similarity

Sequence 7 AA;

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QVMDVD 6

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                                                Query Match
Best Local S
Matches 6
                                                                                                                                               The invention relates to a method of producing cytotoxic T lymphocytes (CTLS) specific for one or more non-tumour self antigen T cell epitopes. The method involves loading antigen presenting cells (APCS) having class I major histocompatibility complex molecules with the T cell epitopes, and culturing the CDB+ T cells with the APCs to activate precursor CDB+ T cells specific for the T cell epitopes. The invention is useful for treating autoimmune disease including rheumatoid arthritis, psoriasis, lupus, autoimmune nephritis, multiple sclerosis, autoimmune thyroiditis, insulin dependent diabetes, Crohn's disease, inflammatory bowel disease, graft versus host disease and transplant rejection and/or allergic disease such as food allergy, hay fever, allergic rhinitis, allergic disease such as food allergy. The invention is also useful in cell therapy. The present sequence is human immunoglobulin E (IgE) HLA-A2 peptide motif. This peptide is used in the exemplification of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cytotoxic T lymphocyte; CTL; tumour; antigen presenting cell; allergy; lupus; autoimmune disease; rheumatoid arthritis; autoimmune nephritis; psoriasis; APC; multiple sclerosis; autoimmune thyroiditis; hay fever; inflammatory bowel disease; insulin dependent diabetes; cell therapy; Crohn's disease; allergic rhinitis; graft versus host disease; asthma;
                                                                                                                                                                                                                                                                                                                                                                                                                                    Producing cytotoxic T lymphocytes for treating e.g. autoimmune diseases, comprises culturing CD8+ T cells with antigen presenting cells to activate precursor CD8+ T cells specific for T the cell epitopes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human immunoglobulin E (IgE) HLA-A2 peptide motif #14.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAE35076;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAE35076 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15-MAY-2001; 2001US-0291300P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13-MAY-2002; 2002WO-US015341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21-NOV-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200292773-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             transplant rejection; human; immunoglobulin E; IgE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28-MAY-2003
                                                                                                                                                                                                                                                                                                                                                                                                        Example 3; Col 47; 49pp; English.
                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (ORTH )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2003-120673/11
                                                l Similarity
6; Conserv
                   4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Jackson MR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORTHO-MCNEIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QVMDVD
QVMDVD
                                                                                                                    9
                                                                                                                    AA;
                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                    63.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Peterson PA,
                                                  Score 30; DB 6; L
Pred. No. 1.4e+06;
0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Kong Y,
                                                                                   Length 9;
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RESULT 12
AABI4481
IID AABI4
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RESULT 13
ABJ12821
ID ABJ12
XX
AC ABJ12
XX
AC ABJ12
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TO-DE
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UNDER HUMAR
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HUMAR
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HUMAR
XW bladd
XX
HOMO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The invention relates to polynucleotide encoding secretional luciferase derived from deep sea luminous shrimp (Oplophorus gracilirostris). The luciferase protein is composed of 19 and 35 kDa proteins and is useful as a reporter enzyme. Antibodies against luciferase and oligonucleotides derived from luciferase polynucleotides are useful for identification of novel luciferase or photoproteins from related species. The present sequence is a peptide from 35 kDa subunit of Oplophorus gracilirostris luciferase. (Updated on 07-AUG-2003 to correct OS field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Oplophorus gracilirostris luciferase 35 kDa subunit peptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Oplophorus gracilorostris.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           07-AUG-2003
26-MAR-2002
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 7 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Example 4; Page 11; 35pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     useful as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Novel secretional luciferase derived from the deep sea luminescent shrimp Oplophorus gracilirostis consists of 19kDa and 35 kDa subunits and is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2002-084319/12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Inouye
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26-APR-2000; 2000JP-00125053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25-APR-2001;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Luciferase; deep
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (CHCC ) CHISSO CORP
                                                          bladder cancer;
                                                                                         Human; 125P5C8;
                                                                                                                                                Human 125P5C8 epitope #1447.
                                                                                                                                                                                                              10-DEC-2002
                                                                                                                                                                                                                                                                                                                               ABJ12821 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3 GOVINDVD 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ū
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GDVMDMD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a reporter enzyme.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2001EP-00109479
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                                                                                                                                                                                                              (first entry)
                                                          cancer; cytostatic; breast cancer;
kidney cancer; colon cancer; ovaria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sea luminous shrimp; decapoda; reporter enzyme;
                                                                                                                                                                                                                                                                                                                               peptide; 9 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             59.6%;
71.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 28;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1.4e+06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 5;
                                                             ancer; prostate cancer;
ovarian cancer; epitop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
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RESULT 14
AAB35101
AB35101
XX AAB35101
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XX Cytc
DE Huma:
XX Cytc
KW Lupu
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Best Local S
Matches 5
                                                                                                                                                                               13-MAY-2002; 2002WO-US015341
                                                                                                                                                                                                                                                                                        WO200292773-A2
                                                                                                                                                                                                                                                                                                                                         Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                    psoriasis; APC; multiple sclerosis; autoimmune thyroiditis; hay fever; inflammatory bowel disease; insulin dependent diabetes; cell therapy; Crohn's disease; allergic rhinitis; graft versus host disease; asthma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The present invention relates to compositions comprising a substance the modulates the status of 12595C8 or a molecule that is modulated by 12595C8. The status of a cell that expresses 12595C8 is modulated. The composition is useful for treating cancer, particularly prostate, bladder, kidney, colon, ovary or breast cancer. The 12595C8 protein and/or a nucleotide sequence encoding the protein is useful for immunising a mammal against cancer. The present sequence is a 12595C8 epitope shown in the exemplification of the invention
                                                                                                                                                                                                                                        21-NOV-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Cytotoxic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human immunoglobulin E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAE35101 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New composition comprising a substance that modulates the status of 125P5C8 gene or a molecule that is modulated by 125P5C8, useful for treating or preventing cancer that expresses or over expresses 125P5C8
                                                                           (ORTH ) ORTHO-MCNEIL PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28-MAY-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 9 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Disclosure; Page 163; 274pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14-MAR-2001; 2001US-00809638
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                             Z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2002-713510/77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                xic T lymphocyte; CTL; tumour; antigen presenting cell; allergy; autoimmune disease; rheumatoid arthritis; autoimmune nephritis;
                             Jackson MR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity 5; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EHGNVKDID 9
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                                                                                                                                                                                                                                                                                                                                                                                            rejection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Challita-Eid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                              2001US-0291300P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Morrison
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                peptide;
                        Peterson PA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        59.6%;
                                                                                                                                                                                                                                                                                                                                                                                    human; immunoglobulin E; IgE.
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Jakobovits A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HLA-A2 peptide motif #39.
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Pred. No. 1.4e+06;
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RESULT 15
ABG67564
ID ABG67
XX ABG67564
AC ABG67
XX Human
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KW Alzhe
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The invention relates to a method of producing cytotoxic T lymphocytes (CTIs) specific for one or more non-tumour self antigen T cell epitopes. The method involves loading antigen presenting cells (APCs) having class I major histocompatibility complex molecules with the T cell epitopes. To and culturing the CD8+ T cells with the APCs to activate precursor CD8+ T cells specific for the T cell epitopes. The invention is useful for treating autoimmune disease including rheumatoid arthritis, psoriasis, lupus, autoimmune nephritis, multiple sclerosis, autoimmune thyroiditis, insulin dependent diabetes, Crohn's disease, inflammatory bowel disease, insulin dependent disease and transplant rejection and/or allergic disease such as food allergy, hay fever, allergic rhinitis, allergic asthma and venom allergy. The invention is also useful in cell therapy. The present sequence is human immunoglobulin E (IgE) HLA-A2 peptide motif. This peptide is used in the exemplification of the invention
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Best Local
                                                                                                                                Screening, diagnosis or prognosis of Alzheimer's disease in subject, comprises detecting Alzheimer disease-associated features or Alzheimer disease-associated protein isoforms in brain tissue from the subject.
                                                                                                                                                                                                                                                                                                                                  Herath
                                                                                                                                                                                                                                                                                                                                                                                                                                                08-DEC-2000; 2000US-0254431P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alzheimer's disease-associated feature; neuropro Alzheimer's disease-associated protein isoform, ADPI tryptic digest peptide.
                                                                                                                                                                                                                                                                                                                                                                                    (OXFO-) OXFORD GLYCOSCIENCES UK LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        29-NOV-2001; 2001WO-GB005289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13-JUN-2002
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     07-OCT-2002
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Pred. No.
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0;

screening,

diagnosis

invention relates to methods and compositions diagnosis or prognosis of Alzheimer's disease

s for (AD)

in

Claim 7; Page 58; 427pp; English.

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cc subject The method comprises analysing a sample of brain tissue from a cc disease-associated features (ADFs), whose relative abundance correlates cc with the presence, absence, stage or severity of AD and comparing the cabundance of each feature with the abundance of that chosen feature in cc hallbeiner's disease-associated protein isoforms (ADFs) and comparing the chain tissue. The methods and compositions of that chosen feature in cc for the screening, diagnosis or prognosis of AD in a subject for cc administered to a subject having AD, or for monitoring the efficacy of a given treating or preventing AD, and for determining the cefficacy of a given treatment regime. An agent that modulates the treatment or prevention of AD in a subject. For the treatment or prevention of AD in a subject for the treatment or prevention of AD in a subject. The human ADPI tryptic digest peptides

Query Match Similarity 83.3%; Score 25; DB 5; Length 9; Best Local Similarity 83.3%; Score 25; DB 5; Length 9; Best Local Similarity 83.3%; Score 25; DB 5; Length 9; Best Local Similarity 83.3%; Pred. No. 1.4e+06; Matches 5; Conservative 0; Mismatches 1; Indels 0; Gaps 0; Scarch completed: August 23, 2004, 10:53:32

Search completed: August 23, 2004, 10:53:32

Search completed: August 23, 2004, 10:53:32
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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Searched:
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.: /cgn2_6/ptodata/2/pubpaa/US07_PUBCOMB.pep:*
.: /cgn2_6/ptodata/2/pubpaa/PCT_NEW_PUB.pep:*
.: /cgn2_6/ptodata/2/pubpaa/US06_PUBCOMB.pep:*
.: /cgn2_6/ptodata/2/pubpaa/US06_PUBCOMB.pep:*
.: /cgn2_6/ptodata/2/pubpaa/US07_NEW_PUB.pep:*
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47
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Copyright (c) 1993 - 2004 Compugen Ltd.
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

1 5 5 6 6 7 7 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Result No. S
2222358822222222233574447	Score
100.0 100.0 100.0 63.8 59.6 53.2 53.2 446.8	Query Match Length
00001110000011100	gth
11 12 12 13 14 14 14 14 14 14 14 14 14 14 14 14 14	BB
US-10-362-527-1 US-10-082-014-273 US-10-082-014-273 US-10-372-076-127 US-10-67-7074-127 US-09-842-164-12 US-09-842-164-12 US-10-147-140-47 US-10-415-014-320 US-10-415-014-320 US-10-415-014-305 US-09-884-767A-110 US-10-9-884-767A-110 US-10-006-869-1617 US-10-395-032-1617 US-10-006-869-1623	ID
Sequence 1, Appli Sequence 273, App Sequence 127, App Sequence 127, App Sequence 12, Appl Sequence 12, Appl Sequence 12, Appl Sequence 291, Appl Sequence 27, Appl Sequence 270, App Sequence 100, App Sequence 110, App Sequence 1617, Ap Sequence 1617, Ap Sequence 1617, Ap	Description

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e 1373,	equence 1196	e 1121,	equence 666,	1000	500	306,	e 176.	e 245.	e 245.	Sequence 245, App	10.	ים מ	7,1	ייס	0 474	0 474	7 7 7	A (7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5 7.5	D (44	D (1 (Sequence 57 Appr) i	1 6) I	oueline ourselve	equence 161,	E 1631

ALIGNMENTS

US-10-362-527-1

Sequence 1, Application US/10362527 Publication No. US20040030106A1 GENERAL INFORMATION:

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RESULT 2
US-10-082-014-273
; Sequence 273, Application US/10082014
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                                                                                                                                                                                                                                          ; TYPE: PRT; ORGANISM: Homo sapiens US-10-362-527-1
                                                                                                                                                                   Query Match
Best Local S
Matches
                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: PCT/EE01/09576
PRIOR FILING DATE: 2001-08-17
PRIOR APPLICATION NUMBER: GB 0020717.5
PRIOR PILING DATE: 2000-08-22
NUMBER OF SEQ ID NOS: 328
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 1
LENGTH: 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Friede, Martin
APPLICANT: Mason, Sean
APPLICANT: Turnell, William Gordon
APPLICANT: Vinals Y De Bassols, Carlota
TITLE OF INVENTION: Vaccine Immunogens Comprising Disulphide Bridged Cyclised Peptide
FILE REFERENCE: B45236
FILE REFERENCE: B45236
                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION NUMBER: US/10/362,527 CURRENT FILING DATE: 2003-02-21
                                                                                                                  1 EDGQVMDVD 9
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                                                                                                                                                                                     Similarity
                                                                                               EDGQVMDVD 9
                                                                                                                                                                    Conservative
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                                                                                                                                                             Score 47; DB 12;
Pred. No. 1.2e+06;
); Mismatches 0;
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                                                                                                                                                           Gaps
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APPLICANT: Priede, Markin
APPLICANT: Priede, Markin
TITLE OF INVENTION: STABILIZED HBC CHIMER PARTICLES AS THERAPEUTIC VACCINE FOR
TITLE OF INVENTION: CHRONIC HEPATITIS
TITLE OF INVENTION: CHRONIC HEPATITIS
TITLE OF INVENTION: UMMBER: US/10/372,076
CURRENT APPLICATION NUMBER: 10/080,299
PRIOR APPLICATION NUMBER: 10/080,299
PRIOR APPLICATION NUMBER: 10/082,014
PRIOR APPLICATION NUMBER: 10/082,014
PRIOR APPLICATION NUMBER: 10/082,014
PRIOR FILING DATE: 2002-02-22
NUMBER OF SEQ ID NOS: 308
SOPTWARE: Patentin version 3.2
SEQ ID NO 127
LENGTH: 9
TYPE: DET
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US-10-372-076-127
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                                                                                                                                                                                                                                                                                            US-10-677-074-127
                                                                                                                                                                                                                                                                                                                  RESULT 4
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Birkett, Ashley J.

APPLICANT: Birkett, Ashley J.

TITLE OF INVENTION: IMMUNOGENIC HBc CHIMER PARTICLES STABILIZED WITH AN N-TERMINAL CY

FILE REFERENCE: ICC-130.0 4564/85124

CURRENT APPLICATION NUMBER: US/10/082,014

CURRENT FILING DATE: 2002-02-22

PRIOR APPLICATION NUMBER: 09/930,915

PRIOR FILING DATE: 2001-08-15

NUMBER OF SEQ ID NOS: 290

SOFTWARE: Patentin version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Publication No. US20030185858A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                           Sequence 127, Application US/10677074 Publication No. US20040156863A1
                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
APPLICANT: Page, Mark
APPLICANT: Friede, Martin
APPLICANT: Schmidt, Annette Elisabeth
APPLICANT: Schmidt, Annette Elisabeth
APPLICANT: Stober, Detlef
TITLE OF INVENTION: STABILIZED HBC CHIMER PARTICLES AS THERAPEUTIC VACCINE FOR
TITLE OF INVENTION: CHRONIC HEPATITIS
FILE REFERENCE: 4564/87179
CURRENT APPLICATION NUMBER: US/10/677,074
CURRENT FILING DATE: 2003-10-01
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o. US20030198645A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%; Score 47; DB 14; Length 9; 100.0%; Pred. No. 1.2e+06;
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Sequence 12, Application US/09842164
Patent No. US20020102687A1
GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: PatentIn version 3.2 SEQ ID NO 127
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CURRENT APPLICATION NUMBER: US/09/842,164
CURRENT FILING DATE: 2001-04-26
PRIOR APPLICATION NUMBER: JAPAN 2000-125053
PRIOR FILING DATE: 2000-04-26
NUMBER OF SEQ ID NOS: 24
SOFTWARE: PatentIn version 3.1
SEQ ID NO 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQ ID NO 11
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PRIOR FILING DATE: 2002-02-22
NUMBER OF SEQ ID NOS: 308
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PRIOR FILING DATE: 2002-02-21
PRIOR APPLICATION NUMBER: 10/080,299
PRIOR FILING DATE: 2002-02-21
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Friede, Martin
APPLICANT: Mason, Sean
APPLICANT: Mason, Sean
APPLICANT: Turnell, William Gordon
APPLICANT: Vinals Y De Bassols, Carlota
APPLICANT: Vinals Y De Bassols, Comprising Disulphide Bridged Cyclised Peptide
TITLE OF INVENTION: and Use Thereof in the Treatment of Allergies
FILE REFERENCE: B45236
FILE REFERENCE: B45236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: PCT/EP01/09576
PRIOR FILING DATE: 2001-08-17
PRIOR APPLICATION NUMBER: GB 0020717.5
PRIOR FILING DATE: 2000-08-22
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CURRENT FILING DATE: 2003-02-21
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                                                                                                                                                        APPLICANT: INOUYE, Satoshi
TITLE OF INVENTION: Luciferase and Photoprotein
FILE REFERENCE: 266497US0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 63.8%; Score 30; DB 12; 1 100.0%; Pred. No. 1.2e+06; tive 0; Mismatches 0;
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US-10-014-340-291
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                                                                                              APPLICANT: Herath, et al
TITLE OF INVENTION: Nucleic Acid Molecules, Polypeptides and Uses Therefor, Including
TITLE OF INVENTION: Diagnosis and Treatment of Alzheimer's Disease
FILE REFERENCE: 9195-078
CURRENT FILING DATE: 2001-12-10
CURRENT FILING DATE: 2001-12-10
NUMBER OF SEQ ID NOS: 823
SOFTWARE: PatentIn version 3.0
LENGTH: 9
TYDE: PRT
ORGANIUM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/10/377,714
CURRENT FILING DATE: 2003-03-04
PRIOR APPLICATION NUMBER: US/09/842,164A
PRIOR FILING DATE: 2001-04-26
PRIOR APPLICATION NUMBER: JP 2000-125053
PRIOR FILING DATE: 2000-04-26
NUMBER OF SEQ ID NOS: 40
SOFTWARE: Patentin version 3.1
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Best Local Similarity
"--ches 5; Conserv:
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; LOCATION: (1)...(7)
; OTHER INFORMATION: PRT, 35 kDa protein, partial
US-09-842-164-12
                                 Matches
                                                 Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                 Sequence 291, Applic Publication No. US20 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 59.6%;
Best Local Similarity 71.4%;
Matches 5; Conservative
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LENGTH: 7
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Publication No. US20040002127A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: INOUYE, SATOSHI
TITLE OF INVENTION: LUCIFERASE AND PHOTOPROTEIN
FILE REFERENCE: 206497US0
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TYPE: PRT
ORGANISM: Oplophorus gracilirostris
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                               Local Similarity hes 5; Conserv
3 GQVMDV 8
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                               Conservative
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                                             53.2%;
83.3%;
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                      Score 25; DB 12; L
Pred. No. 1.2e+06;
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Pred. No. 1.2e+06;
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Pred. No. 1.2e+06,
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APPLICANT: KRUTZCH, HENRY

APPLICANT: MURATA, JUN

TITLE OF INVENTION: AUTOTAXIN: MOTILITY STIMULATING PROTEIN USEFUL IN

TITLE OF INVENTION: CANCER DIAGNOSIS AND THERAPY

FILE REFERENCE: 2026-4149US4

CURRENT APPLICATION NUMBER: US/10/147,140

CURRENT FILING DATE: 2002-05-15

PRIOR APPLICATION NUMBER: 07/822,043

PRIOR APPLICATION NUMBER: 08/249,182

PRIOR FILING DATE: 1994-05-25

PRIOR FILING DATE: 1994-05-25

PRIOR APPLICATION NUMBER: 08/346,455

PRIOR APPLICATION NUMBER: 08/377,221

PRIOR FILING DATE: 1997-11-24

INUMBER OF SEQ ID NOS: 70

COMPMENDE: DOSON: 70
                                                                                                                      APPLICANT: Hubert, Rene S.
APPLICANT: Jakobovits, Aya
TITLE OF INVENTION: NUCLEIC ACID AND CORRESPONDING PROTEIN
TITLE OF INVENTION: ENTITLED 20591B5 USEFUL IN TREATMENT AND
FILE REFERENCE: 511582004300
CURRENT APPLICATION NUMBER: US/10/415,014
CURRENT FILING DATE: 2003-11-19
PRIOR APPLICATION NUMBER: ECT/US02/27760
PRIOR APPLICATION NUMBER: US 60/316,664
PRIOR FILING DATE: 2001-08-30
PRIOR FILING DATE: 2001-08-31
NUMBER OF SEQ ID NOS: 736
; TYPE: PRT; ORGANISM: Homo sapiens US-10-415-014-220
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US-10-147-140-47
                                                                                 SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 220
                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
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Best Local (
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                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Challita-Eid, Pia M. APPLICANT: Raitano, Arthur B. APPLICANT: Faris, Mary
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APPLICANT: LIOTTA, LANCE
APPLICANT: SCHIFFMANN, E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: PRT ORGANISM: Artificial Sequence FEATURE:
                                                               LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH:
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Pred. No.
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                                                                                                                                                                                                                                                                                      IN TREATMENT AND DETECTION OF CANCER
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GENERAL INFORMATION:

APPLICANT: DYAX Corp.

APPLICANT: Ley, Arthur C.

APPLICANT: Luneau, Christopher J.

FILE REFERENCE: DYX-012.1 US, DYX-012.1 PCT

CURRENT APPLICATION NUMBER: US/09/884,767A

CURRENT FILING DATE: 2001-06-19

PRIOR APPLICATION NUMBER: US 09/597,321

PRIOR APPLICATION NUMBER: US 09/597,321

PRIOR APPLICATION NUMBER: US 09/597,321

PRIOR FILING DATE: 2000-06-19

NUMBER OF SEQ ID NOS: 217

SOSTMARE: Patentin version 3.1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; ORGANISM: Homo sapiens US-10-415-014-305
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                                                      ; OTHER INFORMATION: synthetic enterokinase cleavage sequence
US-09-884-767A-110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: PCT/USO2/27760
PRIOR PTLING DATE: 2002-08-30
PRIOR APPLICATION NUMBER: US 60/316,664
PRIOR FILING DATE: 2001-08-31
NUMBER OF SEQ ID NOS: 736
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity bo...
Conservative
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APPLICANT: Faris, Mary
APPLICANT: Hubert, Rene S.
APPLICANT: Jakobovits, Aya
TITLE OF INVENTION: NUCLEIC ACID AND CORRESPONDING PROTEIN
TITLE OF INVENTION: ENTITLED 20591B5 USEFUL IN TREATMENT AND DETECTION OF CANCER
FILE REFERENCE: 511582004300
CURRENT APPLICATION NUMBER: US/10/415,014
CURRENT FILING DATE: 2003-11-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 110, Application US/09884767A Publication No. US20020192789A1
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Challita-Eid, Pia M. APPLICANT: Raitano, Arthur B. APPLICANT: Faris, Mary
                  Query Match
                                                                                                                   TYPE: PRT
ORGANISM: Artificial Sequence
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o. US20040110674A1
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Pred. No.
  Score 22; DB 9;
Pred. No. 1.2e+06;
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                         Length 7;
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US-10-006-869-1617; Sequence 1617, Application US/10006869; Publication No. US20030082166A1
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COTHER INFORMATION: Representative cyclic modulating agent based of the Information cadherin-8 cell adhesion recognition sequence US-10-006-869-1617
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US-10-395-032-1617
                                                                                                       FEATURE:
COTHER INFORMATION: Representative cyclic modulating agent based on OTHER INFORMATION: cadherin-8 cell adhesion recognition sequence US-10-395-032-1617
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CURRENT FILING DATE: 2001-12-03
NUMBER OF SEQ ID NOS: 4052
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 1617
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APPLICANT: Symonds, James Matthew
APPLICANT: Gour, Barbara J.
TITLE OF INVENTION: COMPOUNDS AND METHODS FOR MODULATING NONCLASSICAL
TITLE OF INVENTION: CADHERIN-MEDIATED FUNCTIONS
FILE REFERENCE: 100086.407C7
                                                     Matches
                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM: Artificial Sequence
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                                                                                                                                                             TYPE: PRT ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH:
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66.7%;
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Pred. No. 1.2e+06;
1; Mismatches 1
                                                     1; Mismatches
                                                                   Score 22; DB 15;
Pred. No. 1.2e+06;
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NESULT 15
US-10-006-869-1623
Sequence 1623, Application US/10006869
Publication No. US20030082166A1
GENERAL INFORMATION:
APPLICANT: Symonds, James Matthew
APPLICANT: Symonds, J
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Copyright

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Minimum
Maximum
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                                                                                                                                                            Database
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Pending Patents AA New:*

1: /cgn2_6/ptodata/2/paa/PCT_NEW_COMB.pep:*

2: /cgn2_6/ptodata/2/paa/US06_NEW_COMB.pep:*

3: /cgn2_6/ptodata/2/paa/US07_NEW_COMB.pep:*

4: /cgn2_6/ptodata/2/paa/US07_NEW_COMB.pep:*

5: /cgn2_6/ptodata/2/paa/US09_NEW_COMB.pep:*

6: /cgn2_6/ptodata/2/paa/US10_NEW_COMB.pep:*

7: /cgn2_6/ptodata/2/paa/US10_NEW_COMB.pep:*
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Maximum Match 100%
Listing first 45 summaries
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Gapop 10.0 , Gapext 0.5
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47
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                                                                                                                                                                                                                                                                                                                                      76658
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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98B-119	-09-45	-09-458-298B-	-09-458-298B-5	-09-458-298B-30	-09-458-298B-	-10-111-983-286	-10-111-983-2739	-10-111-983-1	-11	0-806-	0-805-913-24	0-732-862A-411	PCT-US03-39164A-411	US-10-752-380-41	US-10-111-983-10642	PCT-IL03-00501A-44	US-10-059-447B-3	0-712-425-7	-657-	-10-111-983-2690	0-111-983-	0-111-	-862A-	PCT-US03-39164A-141	PCT-US04-05047-127	ID
1196,	Sequence 1121, Ap	666,	e 589,	(4)	e 176,	e 2860	27391,	15379,	1135	e 245.	0 2	411	411	e 41, App	e 10	Œ	e ω	e 72	4.	e 26906	14	e 653,	e 141,	e 141,	Sequence 127, App	Description

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US-09-633-364C-2668 US-09-633-364C-2668 US-09-633-364C-271 US-09-350-401B-259 US-09-350-401B-2502 US-09-350-401B-2566 US-09-350-401B-2566 US-09-350-401B-2566 US-09-350-401B-2566 US-09-350-401B-25691 US-10-111-983-5991 US-10-111-983-5991 US-10-111-983-1995 US-10-654-601-1623 US-10-654-601-1822 PCT-US03-38949-731 US-09-458-298B-135 US-09-458-298B-135

ALIGNMENTS

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RESULT 2
PCT-US03-39164A-141
Sequence 141, Application PC/TUS0339164A
Sequence 141, Application PC/TUS0339164A
GENERAL INFORMATION:
APPLICANT: ASHLEY, BIRKETT J.
APPLICANT: Lyons, Katelynne J.
APPLICANT: Jay, Haron J.
APPLICANT: Jay, Haron J.
CURRENT OF INVENTION: STABILIZED IMMUNOGENIC HBc CHIMER PARTICLES
FILE REFERENCE: ICC-136.0PCT (4564-91156)
CURRENT APPLICATION NUMBER: PCT/US03/39164A
CURRENT FILING DATE: 2003-12-10
FRIOR FILING DATE: 2003-12-10
PRIOR APPLICATION NUMBER: WS 60/432,123
PRIOR FILING DATE: 2002-12-10
PRIOR APPLICATION NUMBER: PCT/US03/05196
PRIOR FILING DATE: 2003-02-20
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APPLICANT: Friede, Martin

APPLICANT: Schmidt, Annette Elisabeth

APPLICANT: Schoer, Detlef

TITLE OF INVENTION: STABILIZED HBC CHIMER PARTICLES AS

TITLE OF INVENTION: CHRONIC HEPATITIS

FILE REFERENCE: 4564/91569

CURRENT APPLICATION NUMBER: PCT/US04/05047

CURRENT FILING DATE: 2004-02-20

PRIOR APPLICATION NUMBER: 10/677,074

PRIOR APPLICATION NUMBER: 10/372,076

PRIOR APPLICATION NUMBER: 10/372,076

PRIOR FILING DATE: 2003-02-21

NUMBER OF SEQ ID NOS: 308

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PCT-US04-05047-127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: PatentIn version 3.2
SEQ ID NO 127
LENCTH: 9
TYPE: PRT
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100.0%; Pred. No.
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US-10-732-862A-141
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PCT-US03-39164A-141
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PRIOR FILING DATE: 2002-12-10
PRIOR APPLICATION NUMBER: US 10/274,616
PRIOR ETILING DATE: 2002-10-21
PRIOR APPLICATION NUMBER: US 10/080,299
PRIOR PILING DATE: 2002-02-21
PRIOR PILING DATE: 2002-02-21
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TITLE OF INVENTION: STABILIZED IMMUNOGENIC HBc CHIMER PARTICLES
FILE REFERENCE: ICC-136.0 (4564-88881)
CURRENT APPLICATION NUMBER: US/10/732,862A
CURRENT FILING DATE: 2003-12-10
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APPLICANT:
APPLICANT: RATTI Giulio
APPLICANT: SCARLATO Vincenzo
APPLICANT: SCARSELLI Maria
TITLE OF INVENTION: NEISSERIAL ANTIGENIC PEPTIDES
FILE REFERENCE: 2300-1654 (PP01654.003)
CURRENT APPLICATION NUMBER: US/10/111,983
CURRENT FILING DATE: 2003-06-27
PRIOR APPLICATION NUMBER: US-60/162616
PRIOR FILING DATE: 1999-10-29
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NUMBER OF SEQ ID NOS: 455
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APPLICANT:
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TYPE: PRT
ORGANISM: Homo sapiens
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GRANDI Guido
MASIGNANI Vega
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RAPPUOLI Rino
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Pred. No. 6e+05;
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APPLICANT:
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               APPLICANT: RATTI Giulio
APPLICANT: SCARLATO Vincenzo
APPLICANT: SCARSELLI Maria
TITLE OF INVENTION: NEISSERIAL ANTIGENIC PEPTIDES
FILE REFERENCE: 2300-1654 (PP01654.003)
CURRENT APPLICATION NUMBER: US/10/111,983
CURRENT FILING DATE: 2003-06-27
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ORGANISM: Neisseria
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PRIOR APPLICATION NUMBER: US-60/162616
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RAPPUOLI Rino
RATTI Giulio
SCARLATO Vincenzo
SCARSELLI Maria
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GRANDI Guido
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RAPPUOLI Rino
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GRANDI Guido
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Pred. No. 6e+0
3; Mismatches
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Pred. No. 6e+05;
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                                                                                                                                                                                                                                                                  Sequence 722, Application US/10712425
GENERAL INFORMATION:
APPLICANT: LEE, FRANK D.
APPLICANT: MENG, XUN
APPLICANT: LIVINGSTON, DAVID
      APPLICANT: LIVINGSTON, DAVID
TITLE OF INVENTION: PROTEOME EPITOPE TAGS AND METHODS OF USE THEREOF IN PROTEIN
TITLE OF INVENTION: MODIFICATION ANALYSIS
FILE REFERENCE: ENGE.PO2-001
CURRENT APPLICATION NUMBER: US/10/712,425
CURRENT FILING DATE: 2002-11-13
PRIOR APPLICATION NUMBER: 60/379,626
PRIOR APPLICATION NUMBER: 60/379,626
PRIOR FILING DATE: 2002-07-01
PRIOR APPLICATION NUMBER: 60/393,137
PRIOR APPLICATION NUMBER: 60/393,137
PRIOR APPLICATION NUMBER: 60/393,137
PRIOR APPLICATION NUMBER: 60/393,197
PRIOR APPLICATION NUMBER: 60/393,197
PRIOR APPLICATION NUMBER: 60/393,197
PRIOR PILING DATE: 2002-07-01
PRIOR APPLICATION NUMBER: 60/393,197
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Best Local
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NUMBER OF SEQ ID NOS: 37764
SOFTWARE: SeqWin99, version 1.02
SEQ ID NO 26906
LENGTH: 8
TYPE: PRT
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Best Local
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APPLICANT: Quiniou, Christiane
TITLE OF INVENTION: Cytokine receptors modulators, method of identifying same, a TITLE OF INVENTION: method of modulating cytokine receptors activity with same CURRENT FILE REFERENCE: GOUD: 040US
CURRENT APPLICATION NUMBER: US/10/693,657
CURRENT FILING DATE: 2003-10-24
PRIOR APPLICATION NUMBER: 60/420,679
PRIOR PRIOR APPLICATION NUMBER: 60/423,530
PRIOR FILING DATE: 2002-11-05
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APPLICATION NUMBER: 60/393,211
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Pred. No. 6e+05;
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Pred. No.
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6e+05;
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; GENERAL INFORMATION:
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Sequence 44, Application PC/TIL0300501A

GENERAL INFORMATION:
APPLICANT: GROYS, Gideon
APPLICANT: GROSS, Gideon
APPLICANT: MARGALIT, Alon
TITLE OF INVENTION: MEMBRANE-ANCHORED BETA-2 MICROGLOBULIN COVALENTLY LINKED TO MHC
TITLE OF INVENTION: PEPTIDE EPITOPES
FILE REFERENCE: GAVISH-004 PCT
CURRENT APPLICATION NUMBER: PCT/IL03/00501A
CURRENT FILING DATE: 2003-06-12
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PRIOR FILING DATE: 2002-07-01
PRIOR APPLICATION NUMBER: 60/393,233
PRIOR FILING DATE: 2002-07-01
PRIOR APPLICATION NUMBER: 60/393,235
PRIOR FILING DATE: 2002-07-01
PRIOR APPLICATION NUMBER: 60/393,280
PRIOR APPLICATION NUMBER: 60/393,280
PRIOR APPLICATION NUMBER: 60/430,948
PRIOR APPLICATION NUMBER: 60/430,948
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CURRENT FILING DATE: 2002-01-29
PRIOR APPLICATION NUMBER: 60/064,683
PRIOR FILING DATE: 1997-11-03
PRIOR APPLICATION NUMBER: 10/185,476
PRIOR APPLICATION NUMBER: 11/185,476
PRIOR FILING DATE: 1998-11-03
NUMBER OF SEQ ID NOS: 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Smith, Daniel
TITLE OF INVENTION: ALPHA-N-ACETYLGALACTOSAMINIDASE FROM CLOSTRIDIUM PERFRINGENS
FILE REFERENCE: 0994.00134
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PRIOR APPLICATION NUMBER: 60/433,319
PRIOR FILING DATE: 2002-12-13
PRIOR FILING DATE: 2002-12-13
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Pred. No. 6e+0)
4; Mismatches
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6e+05;
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; OTHER INFORMATION: Synthetic PCT-IL03-00501A-44
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SOFTWARE: SeqWin99, version 1.02
SEQ ID NO 10642
LENGTH: 9
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PRIOR FILING DATE: 2002-06-12
NUMBER OF SEQ ID NOS: 64
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EQ ID NO 44
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CURRENT FILING DATE: 2003-06-27
CURRENT FILING UNMEER: US-60/162616
PRIOR APPLICATION NUMBER: US-60/162616
PRIOR FILING DATE: 1999-10-29
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APPLICANT: BURROWS, SCOTT R.

APPLICANT: BURROWS, SCOTT R.

TITLE OF INVENTION: BBV CTL EPITOPES

FILE REFERENCE: FBRC:008

CURRENT APPLICATION NUMBER: US/10/752,380

CURRENT FILING DATE: 2004-01-06

PRIOR APPLICATION NUMBER: US/09/194,450

PRIOR FILING DATE: 1999-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: NEISSERIAL ANTIGENIC PEPTIDES FILE REFERENCE: 2300-1654 (PP01654.003)
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ORGANISM: Artificial Sequence
                                                                                              APPLICANT: KHANNA, RAJIV
APPLICANT: KERR, BEVERLEY M.
APPLICANT: MISKO, IHOR S.
APPLICANT: MOSS, DENIS J.
APPLICANT: BURROWS, SCOTT R.
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SCARLATO Vincenzo
SCARSELLI Maria
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PIZZA Mariagrazia
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Pred. No.
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Pred. No. 6e+0
2; Mismatches
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APPLICANT: ASHLEY, BIRKETT J.
APPLICANT: Lyons, Katelynne J.
APPLICANT: Lyons, Katelynne J.
APPLICANT: Lyons, Katelynne J.
TITLE OF INVENTION: STABILIZED IMMUNOGENIC HBc CHIMER PARTICLES
FILE REFERENCE: ICC-136.0 (4564-88881)
CURRENT APPLICATION NUMBER: US/10/732,862A
CURRENT FILING DATE: 2003-12-10
PRIOR APPLICATION NUMBER: US 60/432,123
PRIOR FILING DATE: 2002-12-10
PRIOR APPLICATION NUMBER: US 10/274,616
PRIOR APPLICATION NUMBER: US 10/274,616
PRIOR FILING DATE: 2002-10-21
PRIOR APPLICATION NUMBER: US 10/080,299
PRIOR FILING DATE: 2002-02-21
PRIOR APPLICATION NUMBER: US 10/080,299
PRIOR FILING DATE: 2002-02-21
PRIOR APPLICATION NUMBER: US 10/080,299
PRIOR FILING DATE: 2002-02-21
PRIOR APPLICATION NUMBER: US 10/082,014
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APPLICANT: ASSILEY, BIRKETT J.
APPLICANT: Lyons, Katelynne J.
APPLICANT: Jay, Haron J.
APPLICANT: CC-136.0PCT (4564-91156)
FILE REFERENCE: ICC-136.0PCT (4564-91156)
CURRENT APPLICATION NUMBER: PCT/US03/39164A
CURRENT FILING DATE: 2003-12-10
PRIOR APPLICATION NUMBER: US 60/432,123
PRIOR APPLICATION NUMBER: DCT/US03/05196
PRIOR APPLICATION NUMBER: PCT/US03/05196
PRIOR PRIOR APPLICATION NUMBER: PCT/US03/05196
PRIOR FILING DATE: 2003-02-20
PRIOR FILING DATE: 2003-02-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQ ID NOS: 50
SOFTWARE: PatentIn Ver. SEQ ID NO 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: PatentIn version 3.2 SEQ ID NO 411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
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                                                                                                                                                                                                                                                                                                                                                   Sequence 411, Application US/10732862A GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity 75.0 Matches 3; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE: OTHER INFORMATION: Description of Artificial Sequence: OTHER INFORMATION: Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: PRT ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OTHER INFORMATION: primer protein seugence
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FILING DATE:
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    2002-02-22
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100.0%; Pred. No.
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Pred. No. 6e+05;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 6;
6e+05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 1;
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RESULT 15

US-10-805-913-245

US-10-805-913-245

Sequence 245, Application US/10805913

GENERAL INFORMATION:

APPLICANT: Birkett, Ashley J.

TITLE OF INVENTION: INMUNOSENIC HBC CHIMER PARTICLES HAVING ENHANCED

TITLE OF INVENTION: STABLILTY

FILE REFERENCE: 4564/91645 ICC-102.2 DV II

CURRENT FILING DATE: 2004-03-22

PRIOR APPLICATION NUMBER: US/10/805,913

CURRENT FILING DATE: 2001-08-15

PRIOR FILING DATE: 2001-08-15

PRIOR APPLICATION NUMBER: PCT/US01/41759

PRIOR FILING DATE: 2000-08-16

PRIOR PILING DATE: 2000-08-16

PRIOR APPLICATION NUMBER: 60/226,867

PRIOR APPLICATION NUMBER: 60/226,867

PRIOR APPLICATION NUMBER: 60/225,843

PRIOR FILING DATE: 2000-08-16

NUMBER OF SEQ ID NOS: 313

SOFTWARE: Patentin Ver. 2.1

CRGANISM: Hepatitis B virus

US-10-805-913-245
Search completed: August 23, 2004, 11:05:16 Job time : 59 secs
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Best Local Similarity
Marches 3; Conserva
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; ORCANISM: Artificial sequence
; FEATURE:
; OTHER INFORMATION: primer protein seugence
US-10-732-862A-411
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42.6%; Score 20; DB 6;
Best Local Similarity 75.0%; Pred. No. 6e+05;
Matches 3; Conservative 1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQ ID NOS: 455
SOFTWARE: PatentIn version 3.2
SEQ ID NO 411
LENGTH: 6
                                                                            6 MDVD 9
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                                                                                                                                                42.6%; Score 20; DB 6; Length 6; 75.0%; Pred. No. 6e+05; Indels
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Result
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Database :
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                      protein -
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seq length: 9
                      of hits satisfying chosen parameters:
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1: /cgn2_6/ptodata/2,

2: /cgn2_6/ptodata/2,

3: /cgn2_6/ptodata/2,

4: /cgn2_6/ptodata/2,

5: /cgn2_6/ptodata/2,

6: /cgn2_6/ptodata/2,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query
Match
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47
1 EDGQVMDVD 9
                 BLOSUM62
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14.988 Million cell updates/sec
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/cgn2_6/ptodata/2/iaa/5B_COMB.pep:*
/cgn2_6/ptodata/2/iaa/6A_COMB.pep:*
/cgn2_6/ptodata/2/iaa/6B_COMB.pep:*
/cgn2_6/ptodata/2/iaa/BCTUS_COMB.pep:*
/cgn2_6/ptodata/2/iaa/PCTUS_COMB.pep:*
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                 GenCore version 5.1.6 (c) 1993 - 2004 Compugen Ltd.
                             US-09-842-164A-12
US-08-346-4558-47
US-08-346-4558-47
US-08-377-221-47
US-09-483-831.B-47
US-09-483-831.B-47
US-08-447-010-26
US-08-447-010-26
US-08-421-155-6
US-09-187-859-1617
US-08-421-155-6
US-09-187-859-1617
US-08-421-155-6
US-09-187-859-1623
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US-09-187-859-1626
US-09-187-859-1626
US-09-39-5428-1626
US-09-316-766-26
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        89883
Sequence 12, Appl Sequence 47, Appl Sequence 47, Appl Sequence 47, Appl Sequence 26, Appl Sequence 26, Appl Sequence 8, Appl Sequence 8, Appl Sequence 1617, Ap Sequence 1617, Ap Sequence 6, Appl Sequence 6, Appl Sequence 6, Appl Sequence 1623, Ap Sequence 1623, Ap Sequence 1623, Appl Sequence 1623, Appl Sequence 1623, Ap Sequence 1626, Appl Sequence 26, Appl Sequence 26, Appl Sequence 26, Appl Sequence 27, Appl Sequence 28, Appl Sequence 26, Appl Sequence 26, Appl Sequence 26, Appl Sequence 27, Appl Sequence 27, Appl Sequence 28, Appl Sequence 27, Appl Sequence 27
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                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 2
US-08-346-455B-47
                                                                                                                                                                                                                                                                                                                                                                  ; Sequence 47, ; Patent No. 5
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US-09-842-164A-12
; Sequence 12, Application US/09842164A
; Patent No. 6544754
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: INOUYE, SATOSHI
TITLE OF INVENTION: LUCIFERASE AND PHOTOPROTEIN
FILE REFERENCE: 206497US0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: PRT
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                                                            STATE: NEW COUNTRY: U. ZIP: 10154
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	US-09-535-852-1147	US-09-421-868-18	US-08-293-728-18	US-08-672-610A-38	US-07-968-781A-87	PCT-US94-02629-30	US-09-608-790-6	US-09-166-205B-30	US-08-474-853-30	US-08-672-610A-35	US-08-180-209B-30	US-09-839-542B-2405	US-09-187-859-2405	US-08-659-235C-17		US-09-460-384-13	US-08-980-357-36
		Sequence 18. Appl	19,	, מ	2 C	ب - د	y (٥	ب ا ا		ا در ا ۵		2405	17	Sequence 17. Appl	1 0	y n

ALIGNMENTS

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Query Match
Best Local Similarity
""" 5; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/09/842,164A
CURRENT FILING DATE: 2001-04-26
PRIOR APPLICATION NUMBER: JP 2000-125053
PRIOR FILING DATE: 2000-04-26
NUMBER OF SEQ ID NOS: 40
SOFTWARE: PatentIn version 3.1
SEQ ID NO 12
                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy Disk
COMPUTER: IBM PC compatible
                                                                                                                                                   APPLICANT: UNITED STATES OF AMERICA; DEPT.
APPLICANT: OF HEALTH AND HUMAN SERVICES
TITLE OF INVENTION: MOTILITY STIMULATING
TITLE OF INVENTION: PROTEIN USEFUL IN CANCER DIAGNOSIS
TITLE OF INVENTION: THERAPY
NUMBER OF SEQUENCES: 69
CORRESPONDENCE ADDRESS:
ADDRESSEE: MORGAN & FINNEGAN
                                                                         STREET: 345 PARK AVENUE
CITY: NEW YORK
STATE: NEW YORK
COUNTRY: U.S.A.

    Application US/08346455B
5731167

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71.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 28; DB
Pred. No. 3e+C
1; Mismatches
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3e+05;
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IDENTIFICATION METHOD:
; OTHER INFORMATION:
US-08-346-455B-47
                                                                                                                                                                                                                                                                                                                                                                                           RESULT 3
US-08-977-221-47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                          Sequence 47,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                          Patent No. 6084069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REGISTRATION NUMBER: 36,434
REFERENCE DOCKET NUMBER: 2026-4149PCT
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 758-4800
TELEPAX: (212) 758-480
INFORMATION FOR SEQ ID NO: 47:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY: 1i:
MOLECULE TYPE:
DESCRIPTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 07/822,043 FILING DATE: 17-JAN-1992 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/24
FILING DATE: 25-MAY-1994
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: WordPerfect 5.1
CURRENT APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HYPOTHETICAL: No
          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy Disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WordPerfect 5.1
CURRENT APPLICATION DATA:
                                                                                                                                                                                                               NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                      TITLE OF INVENTION: TITLE OF INVENTION:
                                                                                                                                                                                                                                                                      APPLICANT: UNITED STATES OF AMERICA; DEPT.
APPLICANT: OF HEALTH AND HUMAN SERVICES
TITLE OF INVENTION: MOTILITY STRUILATING
TITLE OF INVENTION: PROTEIN USEFUL IN CANCER DIAGNOSIS AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: FILING DATE: 24-MA
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CLASSIFICATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: ATX-216
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                                                                                                                                                 CITY: NEW YORK
STATE: NEW YORK
                                                                                                                                                                                     STREET:
                                                                                                                            COUNTRY:
                                                                                                                                                                                     ADDRESSEE: MORGAN & FINNEGAN
STREET: 345 PARK AVENUE
                                                                                                               ZIP: 10154
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DOROTHY R. AUTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                             GOLMD 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GQVMD 7
                                                                                                                                                                                                                                                                                                                                                                        Application US/08977221
                                                                                                                                   U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28-NOV-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              24-MAY-1995
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80.0%;
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                                                                                                                                                                                                                                                          THERAPY
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US/08/977,221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 23; DB 1;
Pred. No. 3e+05;
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TITLE OF INVENTION: CANCER DIAGNOSIS AND THERAPY
FILE REFERENCE: 2026-4149US4
CURRENT APPLICATION UNMBER: US/09/483,831B
CURRENT FILING DATE: 2000-01-17
PRIOR FILING DATE: 1992-01-17
PRIOR PRILING DATE: 1992-01-17
PRIOR APPLICATION NUMBER: 08/249,182
PRIOR FILING DATE: 1992-01-17
PRIOR FILING DATE: 1994-05-25
PRIOR APPLICATION NUMBER: 08/249,182
PRIOR FILING DATE: 1994-11-28
PRIOR FILING DATE: 1994-11-28
PRIOR FILING DATE: 1994-11-28
PRIOR FILING DATE: 1994-11-28
PRIOR FILING DATE: 1994-11-24
PRIOR FILING DATE: 1997-11-24
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                  SEQ ID NO 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEFAX: (212) 751-6849 INFORMATION FOR SEQ ID NO: '
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: STRACKE,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 17-JAN-1992
ATTORNEY/AGENT INFORMATION:
NAME: DOROTHY R. AUTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 28-NOV-1994
PRIOR APPLICATION DATA:
                                                             LENGTH: 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER: 20. TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MOLECULE TYPE:
DESCRIPTION: Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:
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OTHER INFORMATION: Description of Artificial Sequence:
                       FEATURE:
                                        ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HYPOTHETICAL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: FILING DATE: 25-MA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IDENTIFICATION METHOD: OTHER INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: amino acids
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: ATX-216
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                 MURATA, JUN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SCHIFFMANN, ELLIOTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LIOTTA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                 KRUTZCH, HENRY
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36,434
2026-4149US3
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          Synthetic
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; IDENTIFICATION METHOD: ; OTHER INFORMATION: PCT-US95-06613-47
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PCT-US95-06613-47
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 Query Match
Best Local Similarity
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Best Local Similarity 80.0%;
Matches 4; Conservative
                                                                                                                                                                                                                                                                  TELEFAX: (212) 751-6849 INFORMATION FOR SEQ ID NO: /
                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 08/249,182
FILING DATE: 25-MAY-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/822,043
FILING DATE: 17-JAN-1992
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy Disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Wordperfect 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US95/0661:
                                                                                                                                                          MOLECULE TYPE:
DESCRIPTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: STRACKE, MINISTER APPLICANT: SCHIFFMANN, ELLIOTT; KRUILDOLL,
APPLICANT: HENRY; MURATA, JUN
TITLE OF INVENTION: MOTILITY STIMULATING
TITLE OF INVENTION: PROFEIN USEFUL IN CANCER DIAGNOSIS AND
THERAPY
THERAPY
                                                                                                                                            HYPOTHETICAL:
                                                                                                                                                                                                                                                    SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                           REGISTRATION NUMBER: 36,434
REFERENCE/DOCKET NUMBER: 20
TELECOMMUNICATION INFORMATION:
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APPLICATION NUMBER: 08/346,455
FILING DATE: 28-NOV-1994
PRIOR APPLICATION DATA:
                                                                                                  LOCATION
                                                                                                                                                                                     TOPOLOGY:
                                                                                                             NAME/KEY: ATX-216
                                                                                                                                                                                                    TYPE: amino acids
STRANDEDNESS: since
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                                                                                                                                                                                                                                                                                                 TELEPHONE:
                                                                                                                                                                                                                                       ENGTH:
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                                                                                                                                                        Peptide
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                                                                                                                                                                                                      single
                                                                                                                                                                                                                                                                                              758-4800
 48.9%;
80.0%;
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Score 23; DB 5;
Pred. No. 3e+05;
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Pred. No.

    Mismatches

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             Length 8;
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US-08-421-155-8
; Sequence 8, Application US/08421155
; Patent No. 5703057
; GENERAL INFORMATION:
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                                                                  RESULT 7
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                                                                                                                                                                        Matches
                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                 TELEPHONE: (416) 595-116
TELEPAX: (416) 595-1163
TELEX: 065-24567 SIMBAS
INFORMATION FOR SEQ ID NO: 2
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
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                                                                                                                                                                                                                                                                                                                                                                                 TELECOMMUNICATION INFORMATION:
TELEPHONE: (416) 595-1155
                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US 0
FILING DATE: 26-MAY-1992
CLASSIFICATION: 536
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CLASSIFICATION DATA:
PRIOR APPLICATION NUMBER: US 08/230,695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDLUM TYPE: Floppy disk
COMPUTER: IBM FC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: MOFFATT, TITLE OF INVENTION:
                                                                                                                                                                                                                                                              STRANDEDNESS: size TOPOLOGY: linear
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                                                                                                                                                                                      Local
                                                                                                                                                                                                                                                                                                                                                                                                               NAME: STEWART, MICHAEL I
REGISTRATION NUMBER: 24,973
REFERENCE/DOCKET NUMBER: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US 0
FILING DATE: 21-APR-1994
CLASSIFICATION: 536
                                                                                                                                                                                                                                                                                                          LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CITY: Toronto
STATE: Ontario
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5. 5770718
                                                                                                                                                                                   Similarity
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                                                                                                                                                                     Conservative
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26-MAY-1992
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                                                                                                                                                                                                                                                                         single
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                                                                                                                                                              46.8%; Score 22;
100.0%; Pred. No.
tive 0; Mismatch
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APPLICANT: APPLICANT: APPLICANT:

Barry, Michael A. Lai, Wayne C. Johnston, Stephen

Stephen A.

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; TOPOLOGY: linear; MOLECULE TYPE: peptide US-08-421-155-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 8
US-08-232-539D-26
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity Matches 3; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEFAX: (713) 789-267
TELEX: 79-0924
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
APPLICANT: Presta, Leonard G.
APPLICANT: Jardieu, Paula M.
TITLE OF INVENTION: 19E Antagonists
NUMBER OF SEQUENCES: 60
CORRESPONDENCE ADDRESS:
             MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy COMPUTER: 1EM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: WinPatin (Genentech) CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/232,539D FILING DATE: 21-Apr-1994
CLASSIFICATION SAND CLASSIFICATION DATA:
APPLICATION DATA: 1891
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: EXNUMBER OF SEQUENCES: ECORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE/DOCKET NUMBER: UT
TELECOMMUNICATION INFORMATION:
TELEPHONE: (512) 418-3000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                                                                           COMPUTER READABLE FORM: MEDIUM TYPE: 3.5 inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: Kitchell, Barbara S. REGISTRATION NUMBER: 33,928
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
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PRIOR APPLICATION DATA:
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STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                       STREET: 1 DNA Way
CITY: South San Francisco
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                                                                                                                                                                                                                                                                   COUNTRY:
                                                                                                                                                                                                                                                                                         STATE:
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                                                                                                                                                                                                                                                                                       California
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Pred. No.
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RESULT 9
US-09-001-157-8
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TOPOLOGY:
US-08-232-539D-26
                                                              US-09-001-157-8
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Best Local Similarity
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 6 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
APPLICANT: Johnston, Stephen
APPLICANT: Barry, Michael A.
APPLICANT: Lai, Wayne C.
APPLICANT: Lai, Wayne C.
   Best Local Similarity
Matches 3; Conserv
                              Query Match
                                                                                                                                         TELEFAX: 512/474-7577
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                  APPLICATION NUMBER: US 08/421
FILING DATE: 07-APR-1995
ATTORNEY/AGENT INFORMATION:
NAME: Kitchell, Barbara S.
REGISTRATION NUMBER: 33,928
REFERENCE/DOCKET NUMBER: UTXL
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REGISTRATION NUMBER: 39,044
REFERENCE/DOCKET NUMBER: POTELECOMMUNICATION INFORMATION:
TELEPHONE: 650/225-1489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 14-AUG-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                       MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0.
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQUENCE ADDRESS:
CORRESPONDENCE ADDRESS:
Arnold, White & Durkee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                             CLASSIFICATION:
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                                                                                              STRANDEDNESS:
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                                                                                                                           LENGTH:
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P.O. Box 4433
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46.8%;
nilarity 60.0%;
Conservative
                                                                                                                             6 amino acids
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Stephen A.
                                                                                                                                                                                                                                                                                                                                                                                          Release #1.0, Version #1.30
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; Pred. No.
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    Score 22; DB 2; pred. No. 3e+05; 2; Mismatches
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                                        Length 6;
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0; Indels

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Gaps

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8

GQVMD

Patent No. 5703057

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RESULT 12
US-08-421-155-6
; Sequence 6, Application US/08421155
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US-09-187-859-1617

Sequence 1617, Application US/09187859A
Parent No. 6358920
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; OTHER INFORMATION: Representative cyclic modulating agent based on
; OTHER INFORMATION: cadherin-8 cell adhesion recognition sequence
US-09-187-859-1617
                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Blaschuk, Orest W.
APPLICANT: Symonds, James Matthew
APPLICANT: Symonds, James Matthew
APPLICANT: Gour, Barbara J.
TITLE OF INVENTION: COMPOUNDS AND METHODS FOR MODULATING NONCLASSICAL
TITLE OF INVENTION: CADHERIN-MEDIATED FUNCTIONS
FILE REFERENCE: 100866.407D1
CURRENT APPLICATION NUMBER: US/09/839,542B
CURRENT FILING DATE: 2001-04-20
SUMMBER OF SEQ ID NOS: 4052
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 1617
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; LENGTH: 7
; TYPE: PRT
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Best Local S
Matches 4
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GENERAL INFORMATION:
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APPLICANT: Gour, Barbara J.
TITLE OF INVENTION: COMPOUNDS AND METHODS FOR MODULATING NONCLASSICAL
TITLE OF INVENTION: COMPENIN-MEDIATED FUNCTIONS
FILE REFERENCE: 100086.407C1
CURRENT APPLICATION NUMBER: US/09/187,859A
CURRENT FILING DATE: 1998-11-06
NUMBER OF SEQ ID NOS: 4052
SOFTWARE: PATENTIN Ver. 2.0
                                                                                                                                                                                                                                                                                                           ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                         TYPE: PRT
                                                                                                                                                                                                                                                                                                      FEATURE:
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                                                                                                                                                                                      46.8%;
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Pred. No. 3e+05;
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Pred. No. 3e+05;
1; Mismatches
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                                                                                                                                                                                                       DB 4;
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                                                                                                                                                                                                   Length 7;
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US-08-571-985-20
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Best Local Similarity
Watches 3; Conserve
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                                                                                                                                                                                            Patent No. 57032.

GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Burstein, Vigal
APPLICANT: Trainin, Nathan
APPLICANT: Rycus, Avigail
TITLE OF INVENTION: THF-gamma2 Analogs and P.
TITLE OF INVENTION: Compositions Comprising
                                                                                                                                                                                                                                                                                                                                  Sequence 20,
Patent No. 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
APPLICANT: Barry, Michael A.
APPLICANT: Lai, Wayne C.
APPLICANT: Johnston, Stephen A.
ITITLE OF INVENTION: Expression
NUMBER OF SEQUENCES: 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INFORMATION FOR SEQ ID NO:
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION:
NAME: Kitchell, Barbara S.
REGISTRATION NUMBER: 33,928
REFERENCE/DOCKET NUMBER: UTSD:411/KIT
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY: linear MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS LENGTH: 8 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/421,155
FILING DATE:
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ADDRESSEE: Arnold, White & Durkee
                                                                                                                                                                  STREET:
                                                                                                                                       STATE:
                                                                                                                                                 CITY: Farmington Hills
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY: Un
                                                                                                                    COUNTRY:
                                                                                                                                                                                   ADDRESSEE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEPHONE: (512) 418-3000
TELEFAX: (713) 789-2679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STATE:
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                                                                                                      48334
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5783557
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                                                                                                                                                          E: Kohn & Associates
30500 No. 5783557thwestern Hwy., Suite 410
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                                                                                                                    USA
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WENTION: Expression Library Immunization
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                46.8%;
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                 Version #1.25
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US/08/571,985

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US-08-571-985-20
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US-08-487-860-60
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APPLICATION NUMBER: IL 106214
APPLICATION NUMBER: 01-JUL-1993
ATTORNEY/AGENT INFORMATION:
NAME: Kohn, Kenneth I
REGISTRATION NUMBER: 30,955
REFERENCE/DOCKET NUMBER: 2163.0
TELECOMMUNICATION INFORMATION:
TELEPHONE: (810) 539-5050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: (810) 539-5055
INFORMATION FOR SEQ ID NO: 20:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
APPLICANT: Yelton
                                                                                                                 TELEFAX: 310-445-9031
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOPOLOGY: li
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/487,860
FILING DATE: 07-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Glaser, Scott
APPLICANT: Rose, William
APPLICANT: Rose, William
APPLICANT: Rose, Mae J.
TITLE OF INVENTION: No. 5792456el Mutant BR96 Antibodies and
TITLE OF INVENTION: Functional Equivalents Reactive With Human Carcinomas
NUMBER OF SEQUENCES: 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
TOPOLOGY: linear MOLECULE TYPE: peptide
                                                                                                                                                          NAME: Adriano, Sarah B.
REGISTRATION NUMBER: 34,470
REFERENCE/DOCKET NUMBER: 30-
TELECOMMUNICATION INFORMATION:
TELEPHONE: 310-445-1140
                                                                                                                                                                                                                                                       CLASSIFICATION: 530
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: FILING DATE: CLASSIFICATION: 51:
                                                                                                 SEQUENCE CHARACTERISTICS
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1es 4; Conservative 0; Mismatches
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STREET: 11150 Santa Monica Bldv., Suite 400
CITY: Los Angeles
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                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY: USA
ZIP: 90025-3395
                                         STRANDEDNESS
                                                           TYPE: amino acid
                                                                            ENGTH:
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US-09-116-766-20
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                                                        Matches
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                                                                                  Query Match
                                                                 Best Local Similarity
                                                                                                                                                                                                  TELEFAX: (248) 539-50:
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                             FILING DATE: 01-JUL-1993
ATTORNEY AGENT INFORMATION:
NAME: MODISOMERY, 11ene N.
REGISTRATION NUMBER: 38,972
REFERENCE/DOCKET NUMBER: 2163
TELECOMMUNICATION INFORMATION:
TELEPHONE: (248) 539-5050
                                                                                                                                                                                                                                                                                                                                                                                   MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/116,766
                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Trainin, Nathai APPLICANT: Rycus, Avigail
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                             CLASSIFICATION:
PRIOR APPLICATION NUMBER:
                                                                                                                                                                                     SEQUENCE CHARACTERISTICS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ZIP: 48334
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                                                                                                                                              TYPE: ami
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GY: linear
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 EDGQ 5
                             EDGQ 4
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30500 No. 5968898thwestern Hwy., Suite 410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
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                                                                                                                                                                                                                    (248) 539-5055
                                                       Conservative
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                                                        46.8%; Score 22; DB
100.0%; Pred. No. 3et
tive 0; Mismatches
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Pred. No. 3e+05;
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                                                                         DB 2;
. 3e+05;
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Search completed: August 23, 2004, 11:04:14 Job time : 33 secs